U.S. Department of Transportation
Maritime Administration

American Marine Highway Program
Application for Designation as a
Marine Highway Project

AMH I-95 Corridor Service Project

June 11, 2010

Submitted by:

Port of New Bedford Harbor Development Commission
Maryland Port Administration
Canaveral Port Authority

New Bedford Harbor Development Commission - Maryland Port Administration - Canaveral Port Authority

June 11, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

SUBJECT: New Bedford Harbor Development Commission, Maryland Port Administration and Canaveral Port Authority – American Marine Highway Program Application for Designation as a Marine Highway Project – "AMH I-95 Corridor Service"

Dear Matsuda:

New Bedford Harbor Development Commission, Massachusetts, Maryland Port Administration and the Canaveral Port Authority, Florida, solicit a U.S. Maritime Administration Designation as a Marine Highway Project under the *"America's Marine Highways Program"* as described in the Final Rule published in the April 9, 2010 Federal Register. The requested designation for the **"AMH I-95 Corridor Service"** as a Marine Highway Project supports the development of the "Proposed America's Marine Highway (AMH) Corridor that parallels I-95" extending from Florida to Maine.

The recently announced opportunity to designate the **"AMH Corridor Service" project** and its project components of the Port of New Bedford, Port of Baltimore and Port Canaveral under the AMH Program has been eagerly awaited for some time based on the planning and development discussions which have occurred between our three Ports. The New Bedford Harbor Development Commission, Maryland Port Administration and Canaveral Port Authority are confident that the **"AMH Corridor Service"** project and its project components at the three ports will address the intent and meet the requirements of Proposed Marine Highway Corridor that parallels I-95 and the AMH Program.

The proposed **"AMH Corridor Service"** project and its combined AMH projects components described herein demonstrates the commitment of three public authorities working across thirteen States and the District of Columbia with private organization interest towards the goal of realizing significant expansion of seaborne freight along the East Coast of the United States under the AMH Program.

We hope this letter and attached materials are sufficient to ensure the designation of the proposed Port of New Bedford, Maryland Port Administration and Port Canaveral's **"AMH Corridor Service" project** and its project components under the AMH Program rule. Please contact Kristin Decas (508) 961-3000 or kdecas@newbedford-ma.gov , James J. White, (410) 385-4401 jjwhite@marylandports.com or J. Stanley Payne (321) 783-7831 spayne@portcanaveral.com if you require additional information.

Sincerely,

Port of New Bedford Harbor Development Commission

Kristin Decas
Port Director & HDC Executive Director

Maryland Port Administration

Kathy Broadwater for James J. White

James J. White
Executive Director

Canaveral Port Authority

J. Stanley Payne
Chief Executive Officer

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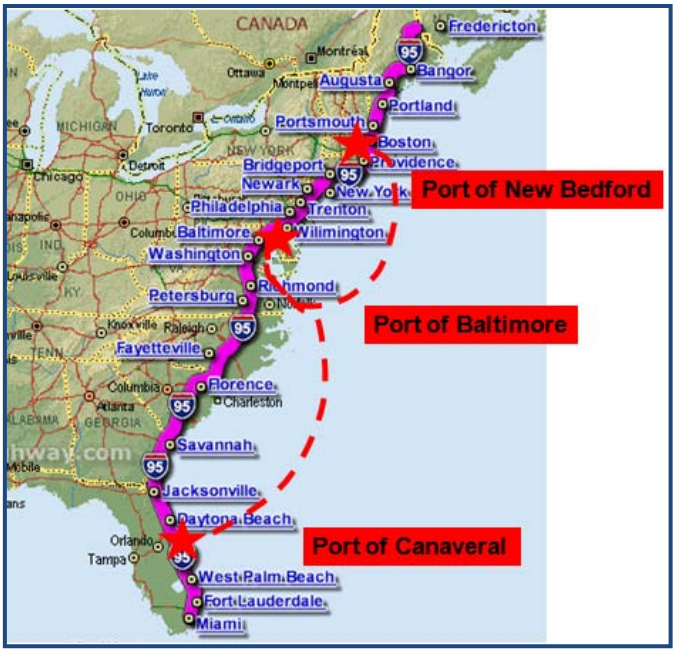
The AMH Project – "AMH I-95 Corridor Service" Overview

The proposed AMH Project - **AMH I-95 Corridor Service** project represents a commitment by the Port of New Bedford/Harbor Development Commission, Maryland Port Administration and Canaveral Port Authority and is supported by public and private stakeholders to implement and promote the establishment of an AMH service along the "proposed AMH that parallels the I-95 corridor".

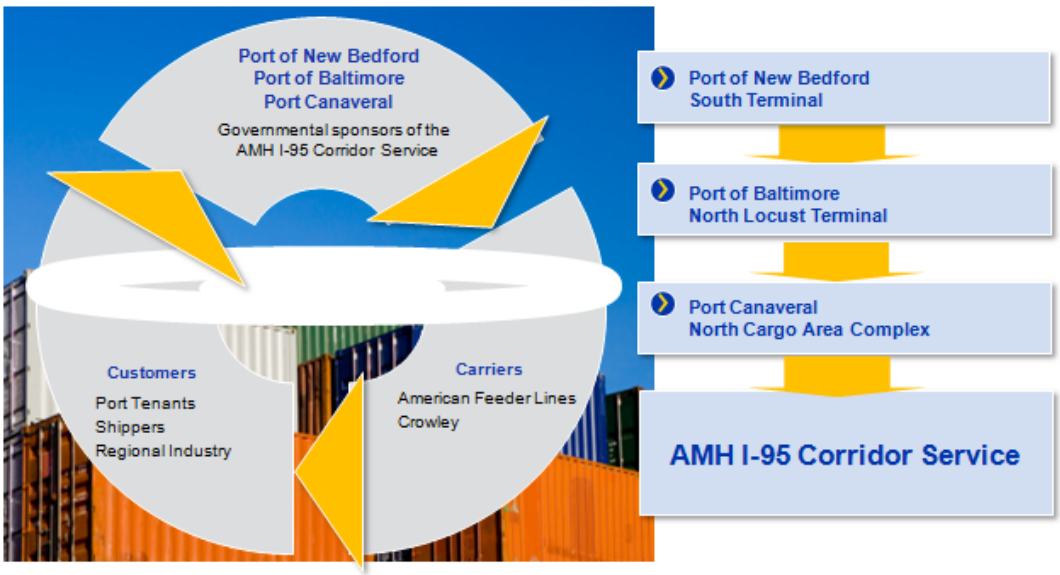


Project Goal: **AMH I-95 Corridor Service** project under development by Port of New Bedford/Harbor Development Commission, Maryland Port Administration and Canaveral Port Authority will provide a competitive, reliable and environmentally responsible alternative to the existing surface modes of transportation carrying containers, trailer loads and passengers on the Interstate I-95 corridor from Florida to Maine and all areas in between along the East Coast.

The Objectives:

- Expand and enhance existing port terminals to accommodate the demands of the AMH Program.
- Develop new port terminal facilities to accommodate the increased capacity for wheeled cargo, containerized cargos both lift on/lift off and roll on/roll off and potential passenger movement.
- Allow for Jones Act operating vessels and barges that are modern and state-of-the-art for AMH shipping.
- Provide economical AMH/Feeder intra-costal service for door to door delivery, repositioning, and distribution of domestic and international containers along the East Coast of the U.S.
- Provide a logical seaborne link connecting the U.S. rail and truck transportation systems to the existing international seaborne container network.
- Develop an AMH service that will relieve interstate highway gridlock, port congestion and pollution caused by increasing container truck traffic.
- Offer a "Green" transportation solution for U.S. importers and exporters along the "Proposed AMH corridor that parallels I-95".

The **AMH I-95 Corridor Service** project has three Port project components that together create the overall project and has the expressed support of private carriers, shippers and operators. The **AMH I-95 Corridor Service** project components are schematically presented in this figure.



The following provides in summary descriptions the three Port project components.

South Terminal – Port of New Bedford - The South Terminal Expansion with the USACE scheduled extension of the channel and berth line and adjacent upland development would accommodate cargo and shipping activities as an AMH terminal. Potentially key to this development is the near-term need for creating a port operational area for supporting off-shore wind energy development in Massachusetts. This facility would be designed for berth, loading, and covered space for an energy port and future AMH activities. As part of its economic development and harbor plan strategy, New Bedford seeks to emerge as a leader in the AMH Program and alternative energy and build its Port and landside infrastructure to support the operations of AMH and renewable energy technology companies.

The South Terminal Expansion involves dredging the berth area in front of the bulkhead, filling land side of the bulkhead and improvements to the structure of the pier, and an 800' southern extension of the existing bulkhead. This is a long planned capital expenditure that would increase the usable marine-industrial bulkhead space within New Bedford Harbor. The proposed southern extension will increase the Terminal's cargo handling/storage by 22.7 acres and will allow expanded use of the facility. Deeper drafts of -30 feet would be accommodated with proposed dredging. These improvements will allow full loading and unloading of AMH vessels up to 1,000 feet in length.

North Locust Terminal - Port of Baltimore - North Locust Point Terminal (NLP) is located on the south shore of the Northwest Branch of the Patapsco River on the opposite side of the peninsula from South Locust Point Terminal. Its origins as a marine terminal date back to the mid-1800's. The Maryland Port administration (MPA) purchased this property from the CSX railroad in 2001. Currently, there are two functional finger piers (4/5 and 10), two closed finger piers (3 and 6), two piers with just substructure remains (8 and 9), and a yard area in the southeast corner. Total leasable area including piers and backland areas is 28.5 acres. Within the past four decades, this facility has typically handled liquid bulk and break-bulk commodities; however it has occasionally been used for project cargoes and RoRo operations.

The channel is at -35 feet to the North Locust Terminal. There are a total of nine (9) berths with water depths ranging from -33 feet to -34 feet and berth lengths of 635 feet to 1,235 feet. Currently there are cranes located at Pier 4/5 East which include 2 tower gantry at 75 tons and 1 container with 34 ft. gauge with a capacity of 40 long tons with spreader and the outreach is 103'-6". Two water routes access Baltimore - the Chesapeake and Delaware Canal and the Chesapeake Bay.

North Cargo Area Complex - Port Canaveral - The proposed project entails the construction of a new multipurpose berth and landside terminal to support the development of both cargo and passenger service at Port Canaveral. The proposed berth and terminal are to be located in the North Cargo Area complex of Port Canaveral immediately adjacent to a major highway with excellent access and sufficient capacity to accommodate the traffic generated by the project. The berth itself is to be a standard cargo pier constructed on pilings with a typical bulkhead wall. The Canaveral Port Authority evaluated the feasibility of constructing a concrete deep wall bulkhead/berth combination, but determined that the extra cost of the deep wall was not warranted given the proposed berth depth (-31 ft) and the relatively shallow draft of cargo and passenger vessels expected to utilize the

proposed berth.

The marine terminal component of the project consists primarily of a paved cargo yard which can also serve as a parking lot or queuing yard for passenger operations. Terminal buildings or warehouses are not proposed as part of this grant application and would likely be constructed by terminal operators (cargo, passenger, or both) at a later date. The need for this project has been determined based on existing conditions and forecast growth in both cargo and passenger activity at Port Canaveral described elsewhere in this application. The project area is connected to the regional transportation network via State Road 401, a limited access 4 lane highway. State Road 401 is uncongested and offers excellent mobility for the proposed new terminal. While Port Canaveral is not served by on-dock rail, short dray times to the Central Florida market (30 to 45 minutes), efficient passenger bus service (30 minutes to Orlando International Airport), and uncongested area highways (SR 401 and SR 528) combine to ensure efficient movement of people and goods.

SECTION 1. APPLICATION FOR PROPOSED PROJECT

i. Marine Highway Corridors

The Port of New Bedford, Port of Baltimore and Port Canaveral through the development of **AMH I-95 Corridor Service** project will support and promote the development of the "Proposed America's Marine Highway Corridor that parallels I-95" (see Figure 1) extending from Maine to Florida. The I-95 interstate corridor is the main highway on the East Coast of the United States, paralleling the Atlantic Ocean from Maine to Florida and serving some of the most populated urban areas in the country, including Boston, New York City, Providence, New Haven, Philadelphia, Baltimore, Washington, D.C., Richmond, Jacksonville, and Miami. It is the longest of the north–south routes of the Interstate Highway System at 1,925 miles and it passes through fifteen states, more than any other U.S. Interstate Highway. According to the U.S. Census Bureau, only five counties along the route — two in South Carolina, one in southern Virginia, and two in northern Maine — are completely rural. According to the I-95 Corridor Coalition, the region served by I-95 is "over three times more densely populated than the U.S. average.

This AMH Project and its project components address freight and passenger traffic across thirteen States and the District of Columbia with the goal of realizing significant expansion of seaborne freight along the East Coast of the United States under the AMH Program.

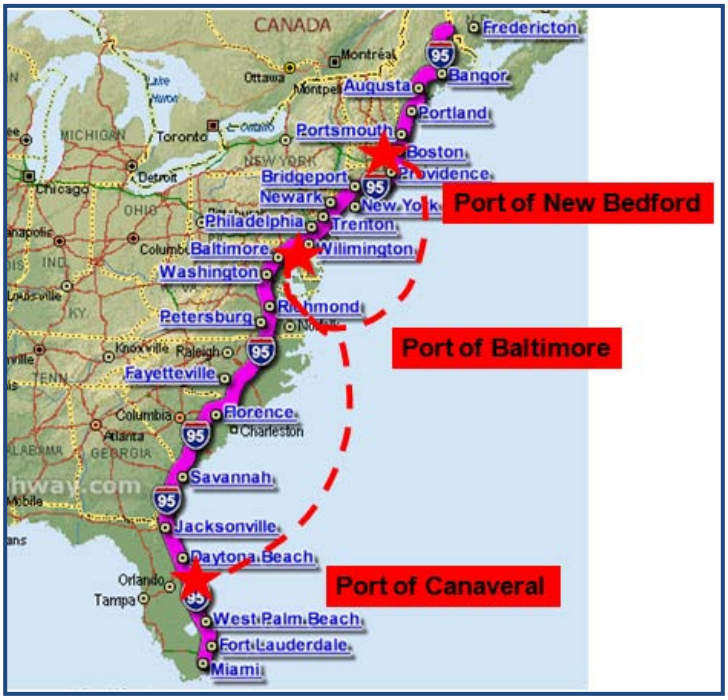
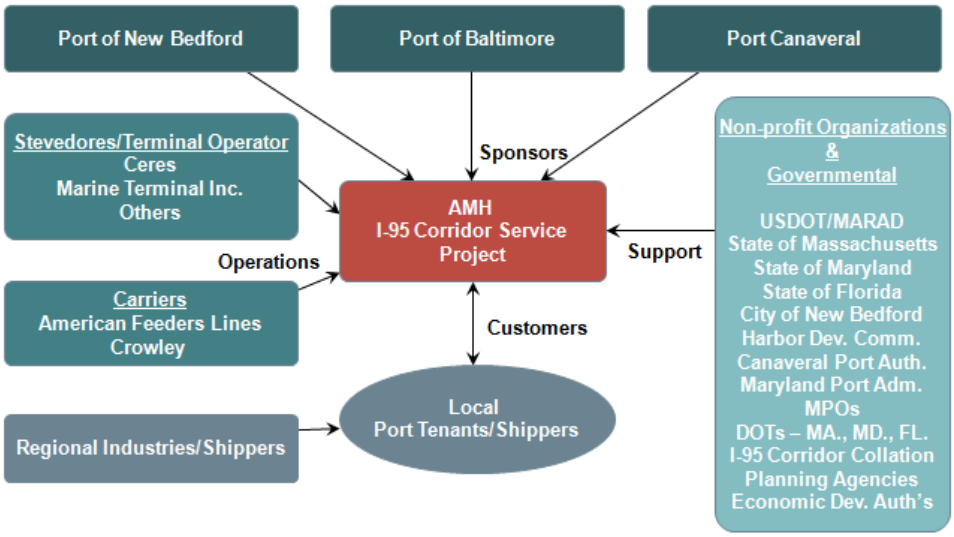


Figure i.1: Proposed AMH I-95 Corridor Service Project

ii. Organization

The Port of New Bedford, Port of Baltimore and Port Canaveral are the governmental sponsors and have taken the lead in organizing the **AMH I-95 Corridor Service** project including several parties that support this AMH Project including Jones Act Carriers, the State governments of Massachusetts, Maryland and Florida, MPOs, State DOTs and other non-profit organizations and governmental agencies. The organization diagram which follows provides an overview of the organization which supports this AMH Project. This includes those non-profit organizations and governmental agencies which have provided support of the project.

Figure ii.1 Project Organization



GOVERNMENTAL SPONSORS

A "Memorandum of Cooperation" and "Letters of Commitment" for the governmental sponsors listed in Table ii.1 are found in Appendix A.

Table ii.1 Project Sponsors (Governmental)

Governmental Sponsors	Address/Contact Information
Port of New Bedford/Harbor Development Commission Kristin Decas, Port Director & HDC Executive Director	106 Co-Op Wharf Post Office Box 50899, New Bedford, MA 02745 Phone (508) 961-3000
Maryland Port Administration James J. White, Executive Director	World Trade Center 401 E. Pratt Street, Baltimore, MD 21202 Phone (410) 385-4400
Canaveral Port Authority J. Stanley Payne, Chief Executive Officer	445 Challenger Road Post Office Box 267, Cape Canaveral, FL 32920 Phone (321) 783-7831

Port of New Bedford/Harbor Development Commission - The Port of New Bedford is a deepwater commercial port with easy access to the proposed I-95 AMH corridor from the Massachusetts coast, located on the northwestern side of Buzzard's Bay approximately nine nautical miles from the Cape Cod shipping canal, 83 miles south of Boston and 166 miles north of New York. The Port serves as the City's greatest natural resource and most critical asset to stimulate investment, attract new industry, create jobs and develop a healthy economy. Over 4,400 people are employed by the commercial port. New Bedford is the number one value fishing port in the nation generating economic activity in excess of $1 billion. The fishing fleet lands over 145 million pounds of product annually leveraging $241 million in direct sales. New Bedford is connected to the world market through its port and can capitalize on unique import/export distribution opportunities developing rapidly in the free global market place. Currently, the Port of New Bedford supports a diverse market of cargo transport handling over $230 million in shipping of bulk commodities and break-bulk cargo.

Maryland Port Administration - Port of Baltimore (POB) and the Maryland Port Administration (MPA) – The POB is a nationally significant port. It is consistently one of the top two ports in the nation for exporting American-made trucks and automobiles, and among the top three ports for international (imports and exports) automobile trade. The POB is made up of both public (State-owned) terminals managed by MPA as well as several dozen private terminals. MPA does not regulate the private terminals; however, MPA assists by providing dredged material sites for all Port users. Port of Baltimore is located seven hours up the Chesapeake Bay with easy access to the proposed I-95 AMH corridor from the Maryland coast. Strategically located in the Mid-Atlantic region of the U.S. east coast, the Port of Baltimore sits in the center of the enormous Washington/Baltimore Common Market. This inland location makes it the closest Atlantic port to major Midwestern population and manufacturing centers and a day's reach to 1/3 of U.S. households. The port provides immediate access to the 6.8 million people in the thriving Washington/Baltimore region, the nation's fourth-largest and one of the wealthiest consumer markets in the U.S.

Canaveral Port Authority - Port Canaveral is located in East Central Florida with easy access to the proposed I-95 AMH corridor from the Central Florida coast. The port is also approximately 35 miles from the Orlando urban area and serves the rapidly growing Orlando and Central Florida urban markets. Port Canaveral anticipates the solicitation of the improved capacity offered by the proposed project to regional freight interests and shipping companies to improve the local service of Central Florida seaport shipping needs currently accommodated by much more distant ports. The short distance between Port Canaveral and the urbanized Central Florida markets makes a strong case for the direct shipment of goods between Central Florida and Port Canaveral. Direct shipment via Port Canaveral allows for dramatically reduced drayage times and offers an opportunity to lessen truck and cargo related congestion on federal, state and regional roadways which are impacted by current freight distribution models. The Canaveral Port Authority has embarked on a comprehensive business development plan designed to capitalize on projected increases in population, freight demand, increased freight network congestion, increased fuel and transportation costs, and anticipated technological improvements in the logistics industry.

PRIVATE STAKEHOLDERS – CARRIERS

Letters of support/intent from the private stakeholders-carriers listed in Table ii.2 are found in Appendix B.

Table ii.2 Private Stakeholders (Carriers)

Private Stakeholders	Address/Contact Information
American Feeder Lines Holdings LP Percy R. Pyne, Tobias Konig	40 Wall Street, 62 Floor, New York, NY 10005 Phone (212) 269-8211
Crowley Michael Golonka, General Manager	Corporate Headquarters - Florida P.O. Box 2110, Jacksonville, FL 322203-2110 Phone (904) 727-2200

iii. Partnerships

A. Private Sector Participation

The Port of New Bedford, Port of Baltimore and Port Canaveral Port are in business discussions with several private terminal operators, shipping lines, vessel operators and industries at their respective ports. Table iii.1 provides a listing of these parties with an indication of their commitment. Letters of intent and support for these companies are found in Appendix B or will be forwarded to MARAD.

Table iii.1 Private Sector Participants

Private Sector Participants	Commitment
American Feeder Lines (AFL)	AFL's fleet of ships will: ▪ Introduce and establish the Hub and Spoke container network in the U.S., ▪ Be a logical replacement for the existing aging and obsolete Jones Act fleet, ▪ Facilitate the deployment of the fleet of "Super Ships" now being

	delivered to the International liner companies along the U.S. East and Gulf coasts. In the future, AFL's feeders will seamlessly distribute large numbers of containers unloaded at one time from the Super Ships that will soon be able make direct Asian/U.S. East/Gulf coast calls via the widened Panama canal ▪ Details of the company can be found at www.american-feeder-lines.co
Ceres Marine Terminals Inc.	Based U.S. East Coast operations the Port of Baltimore has brought Ceres into commercial discussions concerning the Project. Ceres terminal operations integrate the latest terminal management systems. They utilize image acquisition portals, weigh-in-motion scales, closed-circuit television for security and gate control, container/yard equipment positioning through Global Positioning Systems (GPS), and advanced crane control systems. We operate in compliance with the utilization of radiation detection devices for cargo entering terminals and are working closely with the U.S. Customs and the Department of Homeland Security to ensure a safe, secure working environment. http://www.ceresglobal.com
Crowley	Based on U.S. East Coast and Gulf Coast operations the Port of Baltimore has brought Crowley into commercial discussions concerning the Project. Crowley services are provided through a fleet of ocean going RO/RO Barges, Container and RO/RO Ships. Crowley provides liner (container) shipping services with nearly 30 oceangoing Ro/Ro barges, container and Ro/Ro ships and has more than 34,000 containers, trailers and other types of intermodal equipment servicing U.S. port terminals up and down the U.S. East Coast and Gulf Coast Details of the company can be found at www.crowley.com
Maritime Terminal Inc.(MTI)	Based on Port of New Bedford's discussions with MTI they continue to show strong commercial interest to operate an AMH terminal at the Port.
International Longshoremen Association - Local 1413	Local 1413 is a critical transportation stakeholder that offers our clients and partners the opportunity to drive down supply chain costs and create new markets.

To effectively manage and promote AMH shipping at South Terminal, North Locust Terminal, North Cargo Area Complex facilities it will be necessary for the government sponsors and the Private Sector to estimate capital expenditure for Carrier/Terminal Operator for the development of an AMH service consolidated with the Ports capital expenditures as presented in Section vi. The Port capital expenditures as requested under this "Application" could possibly be offset by a MARAD "Short Sea Transportation Grant" under H.R. 2647, Section 3512, Part II of this process. The Financial Model preparation based on the estimated capital expenditures (Step 1), operating costs, expected AMH annual cargo revenues for the seafood industry (as provided in the Quantification of Base Seafood Cargo for a Baseline Configuration of a Short Sea Shipping Hub, Port of New Bedford Harbor Study, see Appendix H) and other commodities with emphasis on financial costs (in various assumptions including a grant from MARAD for a "Short Sea Transportation Grant" under H.R. 2647, Section 3512) resulting in a cash flow analysis and rate of return (ROR) spreadsheet.

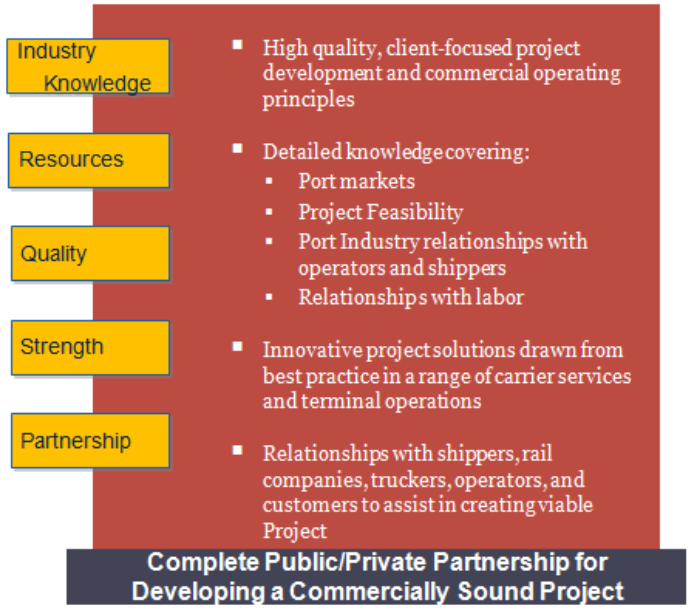


Figure iii.1 The Private Sector Partnership

Based on obtaining a letter of interest from a financial institution – the cash flow analysis and rate of return (ROR) spreadsheet (Step 2) will provide the basis for discussions with specialists within lending institutions and equity capital firms. Using the letter of interest, the cash flow analysis and ROR the intent will be to negotiate and finalize an AMH partnership between a Carrier/Terminal Operator and the Ports. During the above process described the private sector participation brings continuing value to the process as presented in Figure iii.1 above.

B. Public Sector Participation

The Port of New Bedford, Port of Baltimore and Port Canaveral are the primary sponsor of the proposed project; we will coordinate the design, bidding, contract management, construction, inspection and operation of the project components. Our Ports have a proven capability to manage federal and state grants and are well suited to manage this grant funded project in accordance with all applicable Federal statutes, rules, and regulations and have the full support of those public sector partners listed in Table iii.2.

Table iii.2 Public Sector Partners

Public Sector Partners	Contact Information
East Central Florida Regional Planning Council	Phil Laurien 309 Cranes Roost Blvd, Suite 2000 Altamonte Springs, FL 32701 Phone (407) 262.7772
Florida Department of Transportation	Stephanie C. Kopelousos, Secretary 605 Suwannee Street Tallahassee, FL 32399-0450
Space Coast Transportation Planning Organization	Bob Kamm, Director 2725 Judge Fran Jamieson Way, Bldg. B Viera, Florida 32940 Telephone: (321) 690-6890 Fax: (321) 690-6827 www.spacecoasttpo.com
Congress of the United States State of Florida Federal Delegation	Bill Nelson, U.S. Senate George LeMieux, U.S. Senate Bill Posey, Member of Congress Suzanne Kosmas, Member of Congress Washington, DC 20515
City of New Bedford	Scott W. Lang, Mayor 133 Williams Street New Bedford, MA 02740 Phone: 508-979-1410
I-95 Corridor Coalition	George Schoener, Executive Director
Southeastern Regional Planning and Economic Development District	Stephen C. Smith, Executive Director 88 Broadway, Taunton, MA Phone: (508) 824-1367
Department of Conservation and Recreation Commonwealth of Massachusetts	349 Lincoln Street, Bldg. #45 Hingham, MA 02043 Phone: (781) 740-1600
State of Massachusetts Federal Delegation*	
State of Massachusetts State Delegation*	
Seaport Advisory Council Commonwealth of Massachusetts	Timothy P. Murray, Lieutenant Governor Chairman, Seaport Advisory Council 40 Center Street, Fairhaven, MA 02719 Phone: (508) 999-3030
Massachusetts Department of Transportation	
Maryland Department of Transportation*	
State of Maryland Federal Delegation*	
State of Maryland State Delegation*	

*- Letters are pending.

C. Documentation

Letters of support and intent for those parties listed in Table iii.1 and B and iii.2 above are found in Appendix B and Appendix C, respectively.

iv. External Cost Savings and Public Interest

Implementation of the **AMH I-95 Corridor Service** project could result in significant cost savings and benefits to the public and enable the sustainable movement of goods along the I-95 Corridor. The I-95 Corridor supports 35% of the nations vehicle miles, and moves over 5.3 billion tons of freight annually. This project would enable a significant amount of cargo to be diverted from overland routes to the AMH directly resulting in less congestion, less emissions, lower fuel costs, and improved safety for the public and the environment. The following discussion quantifies these savings and benefits based on measurable metrics combined with available "standards and measures" that were developed for this project.

The total savings for this project are estimated to be over $365 million in total savings when the project is at capacity along with additional public benefits, of which over $194 million would of public funds for the maintenance of highway infrastructure for state highway departments. These savings would result in a meaningful return on public investment, as well as contribute to public health and the environment, reduce our dependence on imported energy, and achieve more sustainable practices for the movement of the Nation's cargo.

Assumptions made for this discussion include:

- The volume of containers moving by truck and rail are consistent with the volumes reported by the U.S. Department of Transportation (2006).
- The regional volumes for Florida, New England, and the mid-Atlantic is based on 23 to 25 percent[1] of the available base cargo is diverted to these ports for shipment along the marine highway.
- The standards and measures used in this discussion are based on data from a variety of published sources.
- All diverted goods are appropriate for the marine highway.

Table iv.1 Summary of AMH I-95 Corridor Services Project Cost Savings and Public Benefits

Subheading	Subheading Description	Public Benefit of Short Sea Shipping	Estimated Cost Savings	Additional Comments
A	Potential Relief to Surface Transportation Travel Delay	Because of the length of I-95 Corridor impacted by this project, essentially all urban congested areas will be improved by the reduction of 916,000 truck trips annually along the Corridor.	$155.7 Million/year	
B	Emission Benefits	AMH Vessel emit lower rates of carbon dioxide based on significantly higher efficiency of tons shipped per unit of fuel. Trucks, locomotives, and AMH vessels may incorporate reduced emission engines or biodiesel to further reduce emissions.	1,109,625 metric tons of carbon dioxide emissions which equals a cost savings of $16,644,680 based on a carbon dioxide credit rate of $15 per metric ton.	Additional benefit from reduction in noise, particulates, carbon monoxide, etc.
C	Energy Savings	Because short sea shipping is more efficient in the transportation of cargo, significant savings in fuel costs can be realized.	Save 45,888,100 gallons/year	
D	Landside Transportation Infrastructure Maintenance Savings	Over 460 Million truck vehicle miles could be eliminated from the I-95 Corridor. This would not only reduce wear on pavement and bridges as maintenance, it could also reduce the need for system expansion/upgrades for road and bridge widening, new bridges, etc.	Save $194,626,583 annually for public highway departments	Infrastructure improvement costs for roadways were not included.
E	Safety Improvements	The short sea shipping has safety records that illustrate a lower rate of fatalities and injuries. Spills have historically been less in volume lost for barges, which is still reflected in these savings.	Save 42 lives, prevent 963 injuries, and reduce spills by 23,939 gallons each year	
F	System Resiliency and Redundancy	There are a number of major bridges as well as older and poorly maintained bridges along the I-95 Corridor. These structures are subject to congestion delays, snow impacts, partial closure for maintenance/repairs, and natural disasters. It is noted that the short sea shipping could be affected by offshore hurricane activities.	No costs included for F.	

Supporting tables and information for Table iv.1 are presented in Appendix D.

[1] Four Corridor Case Studies of Short-Sea Shipping Services, Ref. # DTOS59-04-Q-00069, U.S. Department of Transportation, August 2006.

a) Potential Relief to Surface Transportation Travel Delay - The **AMH I-95 Corridor Service** project would impact the transport of goods over an approximate 1,300 mile length of the I-95 Corridor. Over this length, I-95 intersects all of the major urban areas experiencing considerable congestion and travel delays, including but not limited to, New York City, Philadelphia, Washington, Baltimore, Richmond, and Jacksonville. One of the major benefits of this project is that it affects the Corridor over its entire length, in every urban area and every point of congestion. This project eliminates up to an estimated 916,000 trucks trips per year when fully operational. This reduction in truck trips equates to congestion cost benefits of $155.7 million annually, as presented in Table iv.1.

b) Emission Benefits - The implementation of the **AMH I-95 Corridor Service** project is estimated to reduce carbon emissions by almost 85%, which quantifies to over 1,109,000 metric tons annually of carbon dioxide due to increased shipping efficiency on the marine highway. This carbon reduction results in a savings of $16,644,000 annually using a carbon credit of $15 per metric ton. This project will result in the more sustainable movement of goods and contribute to the reduction of green house gas for which transportation has been identified as a major contributor. In addition to carbon dioxide, other air emissions such as carbon monoxide, particulates, and nitrogen oxide will also be reduced substantially. It is noted that future regulations related to green house gases will likely be forthcoming and these future regulations will result in a cost increase for greenhouse gas emissions. Therefore, the implementation of this project would proactively address these potential long-term regulatory costs.

In addition to the actual discharge to air, noise pollution along the highway system would also be reduced by removing up to 916,000 trucks and their associated noise.

c) Energy Savings - The elimination of truck trips and the use of the more efficient AMH vessels to ship goods results in the savings of over 45,888,100 gallons of fuel annually. This savings in fuel contributes to the nation's ability to reduce consumption of foreign energy which is a strategic objective for the Nation.

d) Landside transportation infrastructure maintenance savings - Trucks contribute a high percentage of the annual deterioration of roadway pavement and bridges that must be repaired by the various highway departments, largely through repaving and bridge repair. The FHWA attributes 40% of costs of surface transportation repairs and over 75% of pavement maintenance cost to truck traffic (America's Deep Blue Highway September 2008). It is noted that this discussion focused on the maintenance of existing infrastructure, and does not consider the costs associated with future expansion of infrastructure for additional vehicles.

The calculated savings in public highway department dollars is over $194,626,000 annually for the combined states along the I-95 Corridor.

e) Safety Improvements - Safety records indicate that on a per ton-mile basis, the movement of cargo on AMH is safer for human health and the environment then either truck or rail shipment of goods. Crews can be trained to maintain this safety record and to respond to spills in accordance with plans developed for the types of goods that will be shipped on the marine highway.

It is estimated that the diversion of cargo to the AMH as proposed by the **AMH I-95 Corridor Service** project implementation could save 42 lives from accidents, reduce the number of injuries by 963, and result in a decrease of 23,939 gallons of spills to the environment.

f) System Resiliency and Redundancy - The resiliency offered by the **AMH I-95 Corridor Service** project extends throughout the Atlantic coast. There have been 13 major vulnerable points identified along the overland Corridor at bridges and other features. This project would address these vulnerable points.

The AMH along the Atlantic coast has redundancy with other ports water routes, rail routes, and highways. This project will simply divert the shipment of goods to the AMH rather than continue to burden the already congested highways. This project has the potential to divert rail shipments as well, and relieve congestion and cost on this route as well, however these were not quantified for this submission.

The **AMH I-95 Corridor Service** project ties in major delivery ports at critical points in the shipment of goods, including the Northeast, mid-Atlantic, and Florida. These three strategic location areas can serve as hubs to facilitate the movement of good and cargo north and south relieving existing congestion on I-95 corridor improving service to a large area of manufacturing facilities and consumers, and significantly contribute to the National goals of energy conservation and sustainability.

References for Section iv

1. Four Corridor Case Studies of Short-Sea Shipping Services, Ref. # DTOS59-04-Q-00069, U.S. Department of Transportation, August 2006.
2. A Modal Comparison of Domestic Freight Transportation Effects on the General Public, U.S. Maritime Administration, December 2007.
3. Grant Application for Canaveral Multi-Use Berth and Intermodal Terminal, TIGER Discretionary Grants, September 2009.
4. America's Deep Blue Highway, Institute for Global Maritime Studies, September 2008.
5. http://www.i95coalition.org
6. http://www.epa.gov/oms/climate/420f05001.htm#calculating
7. http://fhwa.dot.gove/policy/hcas).

v. Capacity Alternatives

The **AMH I-95 Corridor Service** project is not proposed as a direct alternative to the construction of a specific new land transportation facility, system or project. However as indicated in Section iv of this Application, implementation of the **AMH I-95 Corridor Service** project will have a direct and significant per year cost savings over the continued use of the I-95 highway estimated at:

Surface Transportation Delays	$155.7MM
Air Emissions	$16.64MM
Infrastructure Maintenance	$194.6MM
Total Annual Savings	**$366.9MM**

In addition and even more compelling, as indicated in Section iv the improvements to safety resulting from implementation of the **AHM I-95 Corridor Service** project will annually **Save 42 lives, Prevent 963 injuries and reduce spills by 23,939 gallons**.

vi. Business Planning

A. Financial Plan

The proposed marine highway corridor consists of the Atlantic coastal shipping lane between Port Canaveral, Florida, Port of Baltimore, Maryland and the Port of New Bedford, Massachusetts. This direct corridor is approximately 1,000 miles long. The proposed **AMH I-95 Corridor Service** project includes the project components at the three ports comprised of berths and landside cargo and passenger facilities at the three partnering seaports. The investment for these project components is estimated between $75M and $85M based on the level of development required to service AMH cargo and passenger volumes.

At the preliminary stage of this project in 2009, the involved parties were primarily the seaport administrative and planning staff at both Port Canaveral and the Port of New Bedford. The cooperation between these two ports has been continuous for over two years. The discussions with MARAD in May 2008 concerning the designation of the I-95 AMH Corridor demonstrate this cooperation. This supporting request document is found in Appendix E.

However, after further evaluation of the cargo movements along the U.S. Coast the ports reached an understanding with the Port of Baltimore to secure a Mid-Atlantic based third project sponsor. Together these ports and their respective project components, eg. South Terminal, North Locust Terminal and North Cargo Area Complex make up the "Project".

Layouts of these project components are found in Appendix F. In summary the key factors are:

South Terminal – Port of New Bedford

- With the extension of the channel and the South Terminal berth line, the development of this undeveloped, upland site would accommodate cargo and shipping activities as an AMH terminal.
- Potentially key to this development is the near-term need for creating a physical area for supporting off-shore wind energy development in Massachusetts. This facility could be designed for berth, loading, and covered space for an energy port and future AMH activities but at substantial costs for infrastructure.
- Extend South Terminal as a solid-fill bulkhead to increase land area to 28.5 acres, offering 1,000 feet of bulkhead with 30-feet of water for on/off-loading.
- Through the New Bedford Redevelopment Authority, the city will be responsible for assembly of the parcels to support the South Terminal Development. Depending on several variables, the City anticipates bonding funds for the purchase of Land. Based on an estimate value of $125,000 per acre, the acquisition cost is approximately $2 million.

North Locust Terminal – Port of Baltimore

- The existing terminal (total leasable area including piers and backland areas is 52.3 acres) can be readily adapted to accommodate a domestic RoRo operation from barge or ship operations that use a ramp. The slip between Piers 3 and 4/5 offers 34' of water. A relatively narrow relieving platform can be constructed at the existing bulkhead that spans between Pier 3 and 4/5 to accommodate a ship ramp. A floating pontoon anchored by two guide piles can be positioned outboard of the relieving platform to accommodate barge ramps. Vessels can be moored using the existing bollards and cleats on Pier 4/5. An adjustable loading ramp will be needed.
- Almost all of the yard area behind Piers 3 and 4/5 is already paved. Approximately 1.75 acres of new pavement will have to be constructed to provide an aggregate total of 639 slots that are sized for 53' long trailers. The existing security gate will have to be replaced by a new entrance gate equipped with an access control system. The new gate will provide two lanes in and two lanes out.
- Capacity can be expanded by leasing the adjacent 4.7 acre Brunswick Yard from CSX. This area will have to be cleared, graded, and paved with drainage and utilities installed, to make it functional at an estimated cost of $1.34M. Expanding the yard by developing this parcel will add another 190 slots. This can be considered for future expansion.
- The Phase I parcel of land under consideration for development are all owned by the MPA and the Port will be responsible for coordination of all utilities and public services required to support to support the AMH terminal.

North Cargo Area Complex - Port Canaveral

- Port Canaveral has sufficient land (60+ acres) to devote to new cargo terminal development relating to AMH activity at the North Cargo Area Complex.
- Potentially key to this development is the near-term need for creating a physical area for the upland operation of the AMH terminal for staging and general terminal operations. The Port is undertaking detailed planning and engineering studies and designs which will be used to refined the capital cost estimates for the development of the North Cargo Area Complex for an AMH Terminal.
- Construction of a general cargo berth as a deck on pile structure to increase the berthing capacity at the North Cargo Area Complex which would offer 800 to 1,000 feet of bulkhead with 35-feet of water for on/off-loading.
- The current parcels of land under consideration for development are all owned by the Canaveral Port Authority and the Port will be responsible for coordination of all utilities and public services required to support to support the AMH terminal.

Table vi.1 below summarizes the capital expenditure costs for the above three project components. Detailed capital expenditure information for the project components is found in Appendix G.

Table vi.1 Capital Expenditure Costs for Project Components

Terminal	Schedule	Unit-Notes	Cap-X Cost
South Terminal Port of New Bedford	2010-2012	Upland Area Development Cost Estimate for improvements to a municipally-owned property for a cargo terminal.	$7.9M
	2011-2012	Procure heavy cranes	$2.9M
	2010-2012	Bulkhead installation and dredging cost estimate	$29.0M
		Sub-total	***$39.8M***
North Locust Terminal Port of Baltimore	2010-2011	Construction of a relatively narrow relieving platform at the existing bulkhead that spans between Pier 3 and 4/5 to accommodate a ship ramp. A floating pontoon anchored by two guide piles to be positioned outboard of the relieving platform to accommodate barge ramps. Existing security gate will be replaced by a new entrance gate equipped with an access control system.	$5.8M
		Sub-total	***$5.8M***
North Cargo Area Complex Port Canaveral	2011-2012	General Berth designed to -35 MLLW and includes dredging and all associated shoreline works.	$25.1M
	2011-2012	Upland development of the first 10-acres of yard area. There exist and additional 50-acres of upland are that can be developed for AMH operations as capacity builds.	$10.5M
		Sub-total	***$35.6 M***
		TOTAL	**$81.2M**

It is anticipated the funding of AMH projects will likely be phased over a period of time that coincides with the growth of overall cargo volumes across the AMH System and the demand for terminal space and berths. This is the case with the "AMH I-95 Corridor Service" project and its project components. Each port has spent extensive resources on developing the AMH project concepts at their respective ports. This has included addressing both the public and private stakeholders of their port and transportation communities. Our ability to move forward on our AMH project is dependent on multiple funding sources that may be available to each port. This includes the fund allocated to the AMH Grant Program FY2010. Other sources of funds which have been identified as sources of capital are listed in Table vi.2 below.

Table vi.2 Sources of Funding by Project Component

Terminal	Responsibility	Sources
South Terminal Port of New Bedford	The Harbor Development Commission (HDC) assumes the responsibility of project funding and fiscal matters as the governing entity for the Port of New Bedford. The HDC as the fiscal agent is responsible over how the local funds are leveraged and/or invested in the project.	1.American Marine Highway Program Final Rule (MARAD2-2010-0035) AMH Grant Program FY2010. 2. Seaport/Environmental Bond Bill - State funds to support the South Terminal are available under the coast facilities improvement section of the environmental bond bill. Both discretionary and earmarked funds are available. The appropriation specific to New Bedford reads as follows: $25M appropriation in Administration Environmental Bond bill "…that not less than $25,000,000 shall be expended on capital improvements to the state pier facility in the city of New Bedford, which improvements shall be made to South Terminal Marine Park further economic development within the port of New Bedford; projects may include, but shall not be limited to, a multi-use facility for water dependent cargo, commercial fishing improvements, commercial marine transportation improvements, marine educational facilities, a fresh produce and fish market, and capital improvements related to tourism, public recreation and other economic development within the Port of New Bedford.

		3. Redevelopment Bond - To be further discussed with state partners 4. Surface Transportation Act - Currently under ongoing reauthorization combining maritime transportation into overall surface transportation federal bond funding. There is the opportunity to work with the federal delegation and build an earmark in to this transportation bond bill for the South Terminal Site development. 5. Private Capital - Based on the Business Plan pro forma and the rate of return (ROR) private sector capital will be considered for aspects of the terminal development.
North Locust Terminal Port of Baltimore	The Maryland Port Administration (MPA) assumes the responsibility of project funding. The MDOT is responsible over how the capital resources are leveraged and/or invested in the project.	1.American Marine Highway Program Final Rule (MARAD2-2010-0035) AMH Grant Program FY2010. 2. Surface Transportation Act - Currently under ongoing reauthorization combining maritime transportation into overall surface transportation federal bond funding. There is the opportunity to work with the federal delegation and build an earmark in to this transportation bond bill for the South Terminal Site development. 3. Maryland Dept. of Transportation – Consolidated Transportation Program – MPA receives capital funding from the MODT Transportation Trust Fund on a priority basis. 4. Private Capital - Based on the Business Plan pro forma and the rate of return (ROR) private sector capital will be considered for aspects of the terminal development.
North Cargo Area Complex Port Canaveral	The Canaveral Port Authority (CPA) assumes the responsibility of project funding and fiscal matters as the governing entity for Port Canaveral. The CPA as the fiscal agent is responsible over how the local funds are leveraged and/or invested in the project.	1.American Marine Highway Program Final Rule (MARAD2-2010-0035) AMH Grant Program FY2010. 2.Florida Ports Council - $960,000 is available via the Florida Ports Council funding stream for the North Cargo Area Complex. The Florida Ports Council (FPC) is an umbrella organization that administers then legislative requirements of the Florida Seaport Transportation Economic Development (FSTED) program established by the Florida legislature in 1990, The FSTED program is charged with comprehensive seaport planning and grant project prioritization and is comprised of representatives from the Florida Department of Transportation, the Florida Department of Community Affairs, the Florida Office of Trade, Tourism and Economic Development, and each of Florida's 14 deepwater seaports, The proposed Intermodal Cargo Yard project is an approved, eligible project in the established Florida Port's Council port project listing. 3. Florida Department of Transportation – FDOT funding – The CPA has an existing FDOT funded partnership project re: the North Cargo Area Complex that is just kicking off. Existing funding commitments total approx. $9 million from FDOT between both FY 10 and FY 11. The Canaveral Port Authority has committed an additional match of $3.75 million. The Florida Department of Transportation (FDOT) is a project partner for most large scale infrastructure projects at Port Canaveral. The FDOT provides project funding through both the Florida Strategic Intermodal System network and the Metropolitan Planning Organization project prioritization and Transportation Improvement Program efforts. For this project, FDOT funding participation has been estimated based on established FDOT funding levels for Port Canaveral as provided in the most current FDOT 5 year work program. The

		proposed project, if selected for funding by USDOT - MARAD, will be incorporated into the FDOT transportation work program as a work program amendment. 4. Surface Transportation Act - Currently under ongoing reauthorization combining maritime transportation into overall surface transportation federal bond funding. There is the opportunity to work with the federal delegation and build an earmark in to this transportation bond bill for the South Terminal Site development. 5. Private Capital - Based on the Business Plan pro forma and the rate of return (ROR) private sector capital will be considered for aspects of the terminal development.

B. Demand for Services

Port of New Bedford

- New Bedford is the number one value fishing port in the nation generating economic activity in excess of $1 billion.
- The fishing fleet lands over 145 million pounds of product annually leveraging $241 million in direct sales.
- New Bedford is connected to the world market through its port and can capitalize on unique import/export distribution opportunities developing rapidly in the free global market place.
- Currently, the Port of New Bedford supports a diverse market of cargo transport handling over $230 million in shipping of bulk commodities and break-bulk cargo.
- Barge operations move aggregate and break-bulk cargo to the Islands of Martha's Vineyard and Nantucket. Shipments of break-bulk cargo consisting of primarily of house goods are exported to Cape Verde and Angola.
- The Port of New Bedford has the largest throughput tonnage of break-bulk perishable commodities in New England. The Port handles reefer (refrigerated) vessels which handle fresh fruit, fresh and frozen fish. Fresh fruit is imported from North Africa, primarily clementines, and vessels are regularly loaded with New Bedford export herring product, direct call service from Norway handling product for Massachusetts fish processors and distributors. Each vessel load creates a $100,000 - $150,000 direct impact employing approximately 30 ILA for off-loading and 20 teamsters for warehouse operations. Those vessels that include export fish product cargo generate a $3 million direct economic impact. Each shipment brings 100 top 150 truckloads of product through the Port.
- Over 4,400 people are employed by the commercial port.

Port of Baltimore

The Port of Baltimore is a nationally significant port because of its unique combination of strategic location, large cargo volumes, and important cargo commodities that are vital to the U.S. economy.

- The Port of Baltimore immediately serves the fourth largest consumer group in the nation, (i.e. Washington-Baltimore metropolitan area), and it has the shortest routes into the nation's heartland with a very large customer base in the mid-west.
- The Port of Baltimore is the closest major seaport to the nation's capital, less than an hour from Washington, DC.
- The Port of Baltimore is a national leader in importing many commodities that are absolutely essential to U.S. national security, such as: iron ore, aluminum, LNG, sugar, gypsum, automobiles, trucks, Roll-on/Roll-off equipment, paper, woodpulp, and salt.
- In 2009, the Port of Baltimore is 12th in the nation for dollar value ($30.2B) of foreign waterborne commerce, and 15th in the nation in foreign cargo tonnage (22.4M tons).
- The Port of Baltimore is home to many MARAD Ready Reserve, and Military Sealift Command ships and the Naval hospital ship Comfort.

- The Port of Baltimore's expanding cruise industry will have nearly 90 cruises in 2010, servicing the top four cruise lines in the world.
- The Port of Baltimore is just an overnight drive to one-third of the Nation's population and industrial manufacturing base.

Port Canaveral

Port Canaveral is well situated to provide efficient AHM connections throughout the state of Florida and waterborne connections to the Caribbean and beyond.

- Port Canaveral is especially well suited to service the burgeoning Orlando metropolitan area (approx. 1 hr. truck dray). This Region is the 14th most populous region in the U.S. The growth rate is 2.3% with an estimated growth of 7.2 million by 2050.
- Port Canaveral enjoys excellent highway connections and nearby rail connection and also has a direct marine link, via a barge canal, to the Atlantic Intracoastal Waterway.
- Port Canaveral has sufficient land (60+ acres) to devote to new cargo terminal development relating to Marine Highway activity and the port is the Grantee of FTZ #136.
- The Port has two RO-RO ramps, 9 cargo piers, two petroleum terminals, customs and border patrol presence, and a U.S. Army Corps of Engineer's maintained channel depth of -44' with pier depths of between -38' and -35'.
- The potential market for east coast ferry service is quite large and based on analysis completed by Port Canaveral the market includes seasonal migratory "snowbird" and "sunbird" traffic and even some specialized truck based cargo traffic.
- Port Canaveral directly serves the U.S. Navy via a Trident submarine basin, Poseidon submarine wharf, and a Naval Ordnance Test Unit (NOTU) detachment.
- The Port maintains a U.S. Air Force presence consisting of an Army transportation wharf and pier used to support 45th Space Wing operations at the immediately adjacent Cape Canaveral Air Station/Eastern Test Range rocket facility.
- The port also serves NASA and the nearby Kennedy Space Center via the barge canal and waterway connection used for transshipment of rocket components and the recovery/retrieval of reusable rocket stages.

C. Analysis

As stated in Section iv, there exist high levels of truck trips between and among the Florida, Maryland and Massachusetts region along the I-95 corridor. Additionally, as imports enter or exports exit the U.S. East Coast there is significant opportunity to capture this traffic creation of a "bluewater", coastal, or intracoastal container barge or ship feeder service between the proposed project components that would reduce dependence on already over-taxed I-95 truck transit.

The Port of New Bedford recently derived an estimate of the cargo that could migrate from overland routes to a New Bedford American Marine Highway (AMH) service using seafood as the base sea cargo with the potential of expanding to other commodities. The Port's consultant has used a diffusion of innovation statistical model to estimate the potential cargo for an existing AMH system from its onset to the following two years. The analysis has resulted in an estimate of cargo that theoretically could migrate from the road to an in place AMH. Based on NAPI's analysis, the Seafood Industry is found capable of providing a base cargo justifying the establishment of an AMH Service. This Report is found in Appendix H.

Table vi.3 - Consolidated Summary – Port of New Bedford AMH Seafood Cargo Share Capture (Years 1 to 3) (to/from the Port)

Service	Combined Mid-Atlantic and Florida			Mid-Atlantic			Florida		
Year End	1	2	3	1	2	3	1	2	3
Market Share Capture									
Cumulative Capture M$	31.95	163.65	302.5	20.77	106.37	196.63	11.18	57.28	105.88
Cumulative Tonnage Captured	21298	109100	201667	13843	70915	131083	7454	38185	70583
Cumulative TEU/Trucks on AMH	1775	9092	16806	1154	5910	10924	621	3182	5882
Number of Barges	13	65	120	9	43	78	5	23	42

Reports have shown that cost differentials between AMH and the Trucking mode are favorable to the AMH. Indeed, on a New Bedford to Florida or to Mid-Atlantic leg, AMH shipping costs are lower by 17% to 31% and by 27% to 31%, respectively, depending on whether or not Harbor Maintenance Taxes are applied.[2]

vii. Proposed Project Timeline

The proposed **AMH I-95 Corridor Service** project timeline considers several developmental factors since this project is dependent on the development of three project components at the Port of New Bedford, Port of Baltimore and Port Canaveral. As presented in Section vi - **Table vi.1 Capital Expenditure Costs for Project Components,** the South Terminal, North Locust Terminal and North Cargo Area Complex will require differing levels of improvements to accommodate AMH services.

The overall project timeline is summarized in Figure vii.1. This project timeline indicates that the construction of the project components, e.g., South Terminal, North Locust Terminal and North Cargo Area Complex will be completed by December 30, 2011. The operations of the project will begin on or about January 15, 2012. It is anticipated based on preliminary project pro formas the project will attain self-sufficiency by Year 3 of operation (January 15, 2015).

Figure vii.1 "AMH I-95 Corridor Service" Project Timeline

In summary key points effecting the project timeline follow:

South Terminal – Port of New Bedford: The project timeline of facility construction expected is 12 to15 months. Accelerated construction of the facility is possible due to the pace of regulatory approvals associated with the

[2] Reeve & Associates, Analysis of the Potential Market for Short Sea Shipping Services over the Port Ports of Fall River and New Bedford, March 29, 2006.

involvement of the project in the State Enhanced Remedy (SER), which would be made possible through the use of CAD Cell material (or other benefit the facility may have associated with the Harbor sediment cleanup) in the construction of the South Terminal. Planning of the layout and engineering of the terminal are 60 percent complete with a target date of August 2010 for final plans. A detailed project timeline for engineering and construction is found in Appendix H. Additionally, the North Terminal will become available for AMH activity, see Appendix J.

North Locust Terminal – Port of Baltimore: The project timeline for this terminal is significantly less than the other two project components. Today, this terminal is a fully functional facility that handles containers and other general cargos. Based on the proposed relieving platform and gate complex improvements which will improve the operating efficiencies for the AMH services it is projected that all improvements can be constructed by July 1, 2011. After receipt of funds, design, permitting and construction could be completed in 15 to 18 months.

North Cargo Area Complex – Port Canaveral: The proposed terminal is included in the adopted Port Master Plan and the waterside component of the project is contained in the approved Port-wide Pier Master Environmental Permit as issued by the Florida Department of Environmental Protection, therefore this project is positioned to be constructed upon the completion of detailed planning and engineering and the placement of funding. Planning of the layout and engineering of the terminal are 30 percent complete with a target date of September 2010 for final plans. Table vii.1 lists the critical milestones that support the success of the overall project timeline.

Table vii.1 Critical Milestone Dates of the Project Timeline

Date	Milestone/Project Activity
06/11/2010	AMH I-95 Corridor Service Project Application to MARAD
07/01/2010	**MARAD to Grant Designation to Projects and Request Short Application**
08/01/2010	South Terminal – Port of New Bedford Engineering Plans Completed
09/01/2010	North Cargo Area Complex – Port Canaveral Engineering Plans Completed
09/15-30/2010	**MARAD to Award Funding from AMH Grant Program**
10/15/2010	Negotiate User Agreement(s) with Terminal Operators and Carriers
10/31/2010	North Locust Terminal – Port of Baltimore Engineering Plans Initiated
12/15/2010	Finalize Operating Plans of AMH 1-95 Corridor Service
12/01/2010	Commercial Close with Contract Execution
12/01/2010	South Terminal – Port of New Bedford – Begin Construction
03/01/2011	North Cargo Area Complex – Port Canaveral – Begin Construction
06/01/2011	North Locust Terminal – Port of Baltimore – Begin Construction
11/30/2011	South Terminal – Port of New Bedford – Construction Complete
12/30/2011	North Locust Terminal – Port of Baltimore – Construction Complete
12/30/2011	North Cargo Area Complex – Port Canaveral – Construction Complete
01/15/2012	**"AMH I-95 Corridor Service" Project Initiates Operations**
01/15/2013	Year 1 of Operations – Assess and Modify Business Plan
01/15/2014	Year 2 of Operations – Assess and Modify Business Plan
01/15/2015	**"AMH I-95 Corridor Service" Project Attains Self-sufficiency**

viii. Support

Support by State and regional government agencies and local stakeholders is critical to meeting the goals of this project relative to addressing potential impediments related to permitting, infrastructure and financing needs. The following identifies several potential impediments to AMH projects and identifies where the **AMH I-95 Corridor Service** project sponsors have been engaged to support resolution of the impediments and where Agency support is needed.

1. Undeveloped relationships with appropriate governmental, regional, state, local government transportation entities, private sector entities and other decision makers can be a potential impediment to the success of the project.

Project Sponsor Support - The three Ports have and continue to regularly work to promote the service and relationships with appropriate governmental, regional, state, local government transportation entities, private sector entities and other decision makers to remove impediment and barriers to success. Such support works to ensures success and is demonstrated by the letters of support presented in Appendices A through C.

South Terminal, Port of New Bedford –The City of New Bedford and the Harbor Development Commission (HDC) have been working hand in hand with the State of Massachusetts, the USEPA and USACE on the continuing investment in the harbor waterfront redevelopment and completion of the New Bedford Harbor Superfund Remedy which dictates project requirements for waterside development. This proposed AMH project is consistent and compatible with the USEPA and community objectives to rehabilitate and revitalizes the natural and economic environments of this port community. This project is consistent with the New Bedford Harbor Plan, a regional plan incorporating the input of multiple regional and local plans and regulatory agencies with oversight and approval of Massachusetts regulatory agencies in, particular the Massachusetts Office of Coastal Zone Management. The HDC working with local stakeholders and the city's Redevelopment Authority, has the responsibility to represents a wide array of harbor interests and has planning, development, and financing authority for city properties within the Port.

North Locust Terminal, Maryland Port Administration - The Port of Baltimore maintains a regular dialogue with State and local agencies as well as regional stakeholders to ensue current and planned projects at the port are understood and compliant with applicable regulatory and permitting requirements. The City of Baltimore working with the Port enacted the Maritime Industrial Zone Overlay District (MIZOD) to eliminate conflicts demarcating the deep water area for port use designating rail and road accesses for intermodal freight movement. The Port established Quality Cargo Handling Action Team which meets monthly with stakeholders to discuss cargo handling issues.

North Cargo Area, Port Canaveral - The Canaveral Port Authority enjoys an excellent relationship and coordination with the local Metropolitan Planning Organization, the Space Coast Transportation Planning Organization (TPO), the Florida Department of Transportation, and The Florida Ports Council which administers the Florida Seaport Transportation Economic Development program and Canaveral is the grantee for Foreign Trade Zone (FTZ) #136. The proposed AMH is an approved, eligible project in the established Florida Port's Council port project listing.

2. A potential impediment to successful project initiation given the demand to start activities this year initiation would be prolonged reviews for relevant permits or other regulatory approvals.

   Project Sponsor Support – For the two project components, South Terminal and North Cargo Complex Area, that have activities requiring environmental regulatory review and permitting the sponsors have worked with local, State and Federal agencies to address the potential permitting requirements and facilitate permitting and project initiation.

   South Terminal, Port of New Bedford- In-water and water-side development in New Bedford Harbor are afforded a unique permitting status addressed under a special process known as the State Enhanced Remedy (SER), see Appendix B. SER was setup specifically for New Bedford Harbor and allows for expedited regulatory decisions to be made by an SER committee rather than standard permitting process.

   North Cargo Area Complex, Port Canaveral- The proposed Multi-Use Berth and landside cargo yard are included in the adopted Port Master Plan and the waterside components of the project are contained in the approved Portwide Pier Master Environmental Permit as issued by the Florida Department of Environmental Protection. Needed Support – Continued Federal agency support is needed to expedite the project regulatory review process in cases such as the **AMH I-95 Corridor** Service project where existing studies and agency agreements can be shown to have addressed the relevant issues.

3. A potential impediment to successful initiation and long term success of this project would be continued transport of state and federally owned cargo via the overland I-95 corridor.

   Support- Federal Agency programs and policies to encourage state and federal entities to utilize the **AMH** for shipping needs would provide needed support to remove this potential impediment to the project.

4. A potential impediment in terms of competitive cost factors for our project and the region is represented by the Harbor Maintenance Tax (HMT) imposed on shippers based on the value of the goods being shipped through ports additionally burdening water-borne freight.

   Support – Federal Agency support to remove or amend to reduce or eliminate the HMT would provide needed support to eliminate or reduce this potential impediment.

5. Success of the project require upgrades to existing infrastructure and equipment, security systems and capital improvements amounting to approximately $81.2M are needed for project implementation and long term execution.

   Support – Federal Designation of the **AMH I – 95 Corridor Service** project as an AMH Project will provide needed support to the project for purpose of obtaining needed funding coupled with the receipt of proposed funding under the AMH Grant Program will facilitate the project implementation and projected timeline requirement.

6. The current lack of available AMH data (Uniform Weights and Measures) is a potential impediment to providing a completed cost benefit analysis and demonstrating the project value to the market.

   Needed Support - Further market and regional analysis and surveys are needed to develop a program wide common and accepted data base to support comparative market analysis that can be used by sponsors to compare and demonstrate their project value and cost saving to the market.

ix. Environmental Considerations

The proposed project components at New Bedford and Canaveral include elements that, but for the work already completed by these sponsors would potentially require NEPA review. Proposed project activities potentially relative to NEPA as previously discussed include dredging and bulkheads and other water front developments. The existing conditions that address potential NEPA issues for these project components are summarized by each facility as follows.

South Terminal, Port of New Bedford - In-water and water-side development in New Bedford Harbor are afforded a unique permitting status. The NEPA relevant elements of this project fall under a special process known as the State Enhanced Remedy (SER), see Appendix B. SER was setup specifically for New Bedford Harbor and allows for expedited regulatory decisions to be made by an SER committee rather than standard permitting process. The SER Committee is managed by the MA Department of Environmental Protection (DEP), and the DEP has been included on this project to act as the liaison to various regulatory authorities in order to ensure implementation of the project is in full compliance with applicable environmental regulations and permitting requirements. Dredging within New Bedford Harbor is overseen by the SER, an interagency group of Federal, State, and Local regulators that set performance standards for and regulates the implementation of waterside development and dredge projects in the Harbor. The SER committee was formed under the authority granted from USEPA and through a series of interagency and interdepartmental Memorandums of Agreement and Memorandums of Understanding developed between the various stakeholders involved in the Harbor Dredge Program and the SER process.

These agreements include:

- MOA between the USEPA and the MADEP;
- MOA between the MADEP and the New Bedford HDC; and

- MOA between the Town of Fairhaven and the New Bedford HDC.

As a result of the formation of the SER committee, dredging projects within New Bedford Harbor do not require Local, State or Federal permitting and the authority of the SER Committee extends to structures including piers, bulkheads, cofferdams, or other structures associated with retention of soil adjacent to New Bedford Harbor. The extension of the South Terminal bulkhead and required fill placement, as well as dredging will be regulated and approved by the SER Committee under these provisions. The proposed South Terminal compoent is located within a Designated Port Area, a designation granted under Chapter 91 of the Commonwealth of Massachusetts Waterways regulations. Thus, this area is specifically set aside by the Commonwealth of Massachusetts to facilitate maritime industrial industry, and ensures maritime industrial development that secures the Federal government's investment. State permits required to realize the proposed project are limited to review by the State of Massachusetts Secretary of the Environment under section 301 CMR 11.03 (6)(b) of Massachusetts General Law. Additional local permits required to realize the proposed project are limited to the jurisdictional boundary associated with the City of New Bedford Conservation Commission (ConCom). The riparian zone in the project area associated with the Acushnet Rivers 25-feet.

North Cargo Area Complex, Port Canaveral - The proposed Multi-Use Berth and landside terminal projects are included in the adopted Port Master Plan and the waterside components of the project are contained in the state and federal permits approved for the Portwide Master Pier Environmental Resource Permit and others as issued by the Florida Department of Environmental Protection and the US Army Corps of Engineers (USACOE). These permits cover respectively, consistency with Florida's Coastal Zone Management Program as required by Section 307 of the Coastal Management Act, compliance with water quality standards under Section 404 of the Clean Water Act (33 U.S.C. 1344), and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) all of which include consultation and concurrence with state and federal wildlife and fisheries agencies. As such the North Cargo Area Complex component of this proposal has NEPA Compliance and it is not anticipated to have any issues invoking additional NEPA process considerations. Furthermore, the Canaveral Port Authority is in the concluding stages of a comprehensive U.S. Army Corps of Engineers Section 203 feasibility study pertaining to a significant widening and deepening of the main channel and the west turning basin. As part of the Section 203 study, a comprehensive Port wide Environmental Assessment was performed and no significant issues were identified. The USACOE is in agreement with the results of the assessment and methodology and concurrence with the conclusions of the Section 203 Environmental Feasibility Study from wildlife and fishery agencies is ongoing and pending.

SECTION 2. COST AND BENEFITS

An economic analysis of the cost/benefit of the proportion of the **AMH I-95 Corridor Service** project for which the Project Designation and AMH Grant Funds are requested, indicates that for a $81.2 Million initial investment, the total savings for this project are estimated to be over $365 million in total savings when the project is at capacity along with additional public benefits, of which over $194 million would be of public funds for the maintenance of highway infrastructure for state highway departments. These annual savings and benefits include:

- Potential Relief to Surface Transportation Travel Delay, Estimated cost savings $155.7 Million/year
- Emission Benefits, 1,109,625 metric tons of carbon dioxide emissions which equals a cost savings of $16,644,680 based on a carbon dioxide credit rate of $15 per metric ton.
- Energy Savings, save 45,888,100 gallons/year.
- Landside Transportation Infrastructure Maintenance Savings, save $194,626,583 annually for public highway departments.
- Safety Improvements, save 42 lives, prevent 963 injuries, and reduce spills by 23,939 gallons each.

Appendix A
"Memorandum of Cooperation" and "Letters of Commitment" for the Governmental Sponsors

MEMORANDUM OF COOPERATION

between and among the

CANAVERAL PORT AUTHORITY

and the

MARYLAND PORT ADMINISTRATION

and the

PORT OF NEW BEDFORD,

HARBOR DEVELOPMENT COMMISSION

This Memorandum of Cooperation is entered between and among the **Canaveral Port Authority**, a State of Florida chartered independent special taxing district and political subdivision, the **Maryland Port Administration**, a unit of the Maryland Department of Transportation and an agency of the Maryland State, whose statutory mission is to increase the waterborne commerce of the Port of Baltimore, and the Port of **New Bedford, Harbor Development Commission,** the governing entity of the Port whose mission is to create economic opportunity and increase commerce for the Port of New Bedford (hereinafter collectively the "**Parties**").

RECITALS

1. On April 9, 2010 the Maritime Administration at the U.S. Department of Transportation published an interim final rule that established the American Marine Highway Program.

2. The Parties hereto understand the importance the American Marine Highway Program's goal of identifying and exploring the development of short sea transportation projects to expand domestic water transportation services as an alternative means of moving containerized and wheeled freight cargo in order to mitigate the economic, environmental, and energy costs of landside congestion.

3. Toward this end, the Parties believe it is in their mutual interests to establish an alliance of cooperation aimed at exploring and identifying ways to develop a Marine Highway Corridor that parallels Interstate I-95 from the Port of New Bedford, Massachusetts to Port Canaveral, Florida.

NOW, THEREFORE, the Parties agree to:

1. Undertake joint initiatives, subject to their respective laws, regulations, and policies to satisfy the above stated objectives which may include:

    a. Data Exchange: The Parties may elect to exchange data that may be helpful in investigating, studying, and analyzing the development of an I-95 American Marine Corridor, including but not limited to forecasting future trade flows,

developing marketing strategies, and obtaining additional knowledge about the short sea shipping market. The Parties may also exchange information that may include type of commodities, cargo tonnage, origin/destination, future plans, and liner services.

b. Market Studies: The Parties may elect to exchange information contained in studies performed by them or by their consultants or representatives that may be of interest to the other party. To the extent permitted by law, the information contained in the studies shall be treated in a confidential manner. The Parties may also elect to perform joint studies that address their areas of respective interest.

c. Modernization and Improvements: The Parties may elect to share information regarding improvements and/or modernization efforts being undertaken and which may have as part of its purpose development of the of short sea shipping in the proposed I-95 American Maritime Corridor.

d. Technological Interchange: The Parties may elect to share their technological capabilities and programs as well as the information contained in them.

2. It is intended that this relationship will continue for five years and be renewable for an additional period upon mutual agreement by both parties.

3. Any Party may terminate the relationship by informing the others in writing and giving a thirty (30) day notice of termination of this Memorandum of Cooperation.

4. All Parties are free to form other partnerships, of a similar or identical nature, with other entities.

5. This Memorandum sets forth the complete agreement of the Parties with regard to this alliance of cooperation. It may be amended in writing only, and such amendment shall be signed and dated by all parties.

6. This Agreement does not and is not intended to create any rights or benefits for any third party. No third party shall have any legally enforceable rights or benefits under this Agreement.

It is the intention of this document to set forth the general intentions of the Parties, and not to set forth any legally binding rights or obligations. This Memorandum will be effective upon the execution of all the authorized representative of each of the Parties.

Canaveral Port Authority

By: _____
J. Stanley Payne
Chief Executive Officer

Date: June 10, 2010

Maryland Port Administration

By: Kathy Broadwater for James J. White
James J. White
Executive Director

Date: 6/10/10

Port of New Bedford
Harbor Development Commission

By: _____
Kristin Decas
Port Director & HDC Executive Director

Date: June 9, 2010

NEW BEDFORD HARBOR DEVELOPMENT COMMISSION

Letter of Commitment

MARINE HIGHWAY PROGRAM:
MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTAION

The New Bedford Harbor Development Commission, the duly authorized entity established to manage, oversee and promote the Port of New Bedford, Massachusetts on behalf of the City of New Bedford and the State of Massachusetts, hereby affirms its full Intent and Commitment to The U.S. Maritime Administration (MARAD) to comply with all requirements of America's Marine Highway Program (AMH) for a "Marine Highway Project in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.

Signed this 9 day of June 2010.

New Bedford Harbor Development Commission

Kristen Decas

Name: Kristen Decas
Title: Port Director & CEO, New Bedford Harbor Development Commission

P.O. Box 50899, New Bedford, Massachusetts 02740 (508) 961-3000 (508) 979-1517 Fax

CANAVERAL
PORT AUTHORITY

Letter of Commitment

AMERICA'S MARINE HIGHWAY PROGRAM:
MARITIME ADMINISTRATION, DEPARTMENT OF TRANSPORTAION

The Canaveral Port Authority, the duly authorized entity established to manage, oversee and promote Port Canaveral, Florida on behalf of the State of Florida, hereby affirms its full Intent and Commitment to The U.S. Maritime Administration (MARAD) to comply with all requirements of the America's Marine Highway Program (AMH) for a "Marine Highway Project in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.

Signed this 2 day of June 2010.

Canaveral Port Authority

Name: J. Stanley Payne
Title: Chief Executive Officer

Port Canaveral & Foreign Trade Zone 136
445 Challenger Road PO Box 267 Cape Canaveral FL 32920 USA
321.783.7831 888.767.8886 www.portcanaveral.com

Appendix B
Letters of support Private Stakeholders

International Longshoremen Association
173 ½ Acushnet Avenue New Bedford, MA 02740
Local 1413
(508) 996-8825

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

June 9, 2010

RE: **Letter of Support for Marine Highway Project(s) In support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

Local 1413 sends this letter as an indication of support of the use of the combined Port of Baltimore, Port of New Bedford and Port Canaveral Marine Highway Project as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. We are committed to supporting a service between the Port of Baltimore in the Mid Atlantic U. S. , Port Canaveral in the South Atlantic U.S and Port of New Bedford In the Northeast U.S.

Local 1413 is a critical transportation stakeholder that offers our clients and partners the opportunity to drive down supply chain costs and create new markets. Our participation in implementing a Marine Highway service allows the port to provide alternative capacity in an underserved and critical lane while having a measurable impact on the environment though dramatically reduced fuel consumption, emissions, and reduced impact on our nation's already strained highway infrastructure.

The designation and development of the Port of Baltimore, Port Canaveral and Port of New Bedford combined AMH project as a program element of the Proposed AMH corridor that Parallels I-95 will add terminal capacity and allow Local 1413 to participate in an efficient and sustainable freight handling program in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and in accordance with the intent of the Energy Independence and Security Act of 2007.

Local 1413 acknowledges the importance of designating the Port of Baltimore, Port Canaveral and Port of New Bedford as part of the AMH program and the overall potential of the AMH program to improve the overall capacity of the national freight transportation system along the U.S. East Coast.

Sincerely,

Ed Lacomb
President/Business Agent

cc: James J. White, Maryland Port Administration
Kristin Decas, Port of New Bedford Harbor Development Commission
J. Stan Payne, Canaveral Port Authority

WHALERS' WHARF

P.O. BOX #7745

NEW BEDFORD, MASSACHUSETTS 02742 USA

TELEPHONE #508+996-8500

FAX #508+991-3431

MARITIME TERMINAL INC.

June 10, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

Maritime Terminal, Inc. sends this letter as an indication of support of the use of the combined Port of Baltimore, Port of New Bedford and Port Canaveral Marine Highway Project as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. We are committed to supporting a service between the Port of Baltimore in the Mid Atlantic U. S., Port Canaveral in the South Atlantic U.S and Port of New Bedford in the Northeast U.S.

Maritime Terminal, Inc. is a port operator and a logistic company that offers its clients and partners the opportunity to drive down supply chain costs and create new markets. Our operations as part of a Marine Highway service allows the port to provide alternative capacity in an underserved and critical lane while having a measurable impact on the environment though dramatically reduced fuel consumption, emissions, and reduced impact on our nation's already strained highway infrastructure. Details of our company can be found at www.maritimeinternational.org

The designation and development of the Port of Baltimore, Port Canaveral and Port of New Bedford combined AMH project as a program element of the Proposed AMH corridor that Parallels I-95 will add terminal capacity and allow Maritime Terminal, Inc. to exploit an efficient freight handling program in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and in accordance with the intent of the Energy Independence and Security Act of 2007.

WHALERS' WHARF
P.O. BOX #7745
NEW BEDFORD, MASSACHUSETTS 02742 USA
TELEPHONE #508+996-8500
FAX #508+991-3431

MARITIME TERMINAL INC.

Maritime Terminal, Inc. acknowledges the importance of designating the Port of Baltimore, Port Canaveral and Port of New Bedford as part of the AMH program and the overall potential of the AMH program to improve the overall capacity of the national freight transportation system along the U.S. East Coast.

Sincerely,

Pierre Bernier
Global Logistics Specialist
Maritime Terminal, Inc.

cc: James J. White, Maryland Port Administration
Kristin Decas, Port of New Bedford Harbor Development Commission
J. Stan Payne, Canaveral Port Authority

AMERICAN FEEDER LINES

June 10, 2010

Mr. David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda,

American Feeder Lines Holdings LP wishes to express encouragement for the use of the Port of New Bedford and Port Canaveral Marine Highway Project(s) as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. The ports share our vision for service along the length of the American Atlantic coastline. We are committed to starting a service and are currently exploring options between Port Canaveral in the South Atlantic U.S ,the Port of New Bedford in the Northeast U.S., and points in between.

American Feeder Lines Holdings LP is a blue water intermodal transportation company that will provide the opportunity to drive down supply chain costs and create new markets. Our Marine Highway activities between Florida and New England and along the Gulf Coast will allow unprecedented access for domestic freight to and between ports along the entire Eastern and Gulf Coasts of the United States. American Feeder Lines LP offers shippers and logistics companies alternative routes on an underutilized and critical interstate lanes while having a measurable impact on the environment though dramatically reduced energy consumption, emissions, and reduced impact on our nation's already strained highway infrastructure. Further details of our company can be found at www.american-feeder-lines.com.

The designation and development of Port Canaveral and the Port of New Bedford's AMH project(s) is very compatible with our planned service. It will foster new terminal capacity and allow American Feeder Lines Holdings LP to explore efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

Sincerely,

American Feeder Lines Holdings LP
Percy R. Pyne IV
Chairman - Founding Partner

cc: J. Stan Payne, Port Canaveral (via email)
Kristin Decas, Port of New Bedford (via email)
Kenneth Parkinson, North American Port Infrastructure LLC (via email)
Bruce McClellan, North American Port Infrastructure LLC (via email)

American Feeder Lines Holdings LP • 40 Wall Street • 62nd Floor • New York • NY 10005 • USA
Phone + 1 212 269 8211 • Fax + 1 212 269 8108 • e-mail: info@american-feeder-lines.com • www.american-feeder-lines.com

CERES MARINE TERMINALS INCORPORATED
2906 CHILDS STREET, 2ND FLOOR
BALTIMORE, MARYLAND 21226
TEL: 443 874 7700
FAX: 443 874 8582

CERES

June 12, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

This letter is being forwarded to you as a sign of support by Ceres Terminals Incorporated for the combined Port of Baltimore, Port of New Bedford and Port Canaveral Marine Highway Project as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. Ceres is committed to quality and providing competitive and efficient stevedoring and marine terminal operation services. We fully understand the importance of how these services will contribute to the success of the AMH.

Ceres has port operations in twenty-two locations throughout North America. We provide stevedoring, terminal operations and ancillary services in the Port of Baltimore. Ceres' progressive vision and outstanding reputation for leadership has distinguished the company as one of the best in the industry.

Ceres Terminals Incorporated operates as a stand-alone company in the Harbour Division of the NYK Group. Ceres is ISO 9001:2000 Certified in all of its Major Port Operations. Both Ceres and NYK are fully committed to protecting the environment. The Ceres Group "Green" Environment Management Vision is as follows: See the environment as it is, envision how it should be and take actions through good stewardship to make changes. Ceres Terminals Incorporated will meet or exceed applicable legal requirements for the environmental management of: prevention of pollution, reduction of environmental impacts, recycling, reduced energy consumption, continual improvement, communication and education.

In March 2005, the NYK Group established the NYK environmental management vision to further strengthen its environmental management activities. To fulfill its objective of supporting a sustainable society, NYK has implemented three medium-term strategies: reducing greenhouse gas emissions, promoting social contribution through activities to conserve the global environment and strengthening group environmental management. These are specifically aimed at realizing "a green and beautiful earth" and passing on "a peaceful society to future generations." The NYK Group's environmental vision is as follows: to contribute to the global environment and creation of sustainable societies by managing environmental risks and arriving at an optimal balance between environment and economy. Under this vision, based on the NYK Group's environmental policy and the concise environmental management plan based on our policy, we operate various environmental activities at specific sites.

ISO 9001

CERES

For a complete overview of Ceres Terminals Incorporated and its subsidiary companies, please consult our corporate website, www.ceresglobal.com or the website of our Parent Company, the NYK Group, at **www.nyk.com.**

The designation and development of the Port of Baltimore, Port Canaveral and Port of New Bedford combined AMH project as a program element of the Proposed AMH corridor that Parallels I-95, will add to terminal capacity and allow for exploration of efficient freight-carrying capacity in accordance with the concepts of the U.S. Department of Transportation's "Corridors of the Future" initiative and in accordance with the intent of the Energy Independence and Security Act of 2007.

Ceres Terminals Incorporated strongly acknowledges the importance of designating the Port of Baltimore, Port Canaveral and Port of New Bedford as part of the AMH program. The AMH program offers great potential towards the improvement of the overall capacity of the national freight transportation system along the U.S. East Coast. This program also contributes to the creation of many needed jobs and economy stimulus – something we will all greatly welcome.

We look forward to a positive ruling. Thank you for your time and consideration.

Sincerely,

cc: James J. White, Maryland Port Administration
Kristin Decas, Port of New Bedford Harbor Development Commission
J. Stan Payne, Canaveral Port Authority

ISO 9001

CROWLEY

TECHNICAL MANAGEMENT

A Subsidiary of Crowley Maritime Corporation

June 10, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

Crowley Technical Management sends this letter as an indication of support of the use of the combined Port of Baltimore, Port of New Bedford and Port Canaveral Marine Highway Project as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. We are committed to investigating a service and are currently exploring options between the Port of Baltimore in the Mid Atlantic U. S., Port Canaveral in the South Atlantic U.S and Port of New Bedford in the Northeast U.S.

Crowley Maritime Corporation is a bluewater intermodal transportation company that offers our clients and partners the opportunity to drive down supply chain costs and create new markets. Our Marine Highway service allows unprecedented access between Ports on the Eastern United States. Crowley Maritime Corporation offers alternative capacity in an underserved and critical lane while having a measurable impact on the environment though dramatically reduced fuel consumption, emissions, and reduced impact on our nation's already strained highway infrastructure. Details of our company can be found at www.crowley.com .

The designation and development of the Port of Baltimore, Port Canaveral and Port of New Bedford combined AMH project as a program element of the Proposed AMH corridor that Parallels I-95 will add terminal capacity and allow Crowley Maritime Corporation to explore efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and in accordance with the intent of the Energy Independence and Security Act of 2007.

Crowley Technical Management acknowledges the importance of designating the Port of Baltimore, Port Canaveral and Port of New Bedford as part of the AMH program and the overall potential of the AMH program to improve the overall capacity of the national freight transportation system along the U.S. East Coast.

Sincerely,

cc: James J. White, Maryland Port Administration
Kristin Decas, Port of New Bedford Harbor Development Commission
J. Stan Payne, Canaveral Port Authority

Sincerely,

Michael Golonka
General Manager
Crowley technical Management

Appendix C
Letters of Support from Public Sector Partners

Congress of the United States
Washington, DC 20515

June 10, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95. Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

We are writing to express our support for designating the Port of New Bedford and Port Canaveral Marine Highway Project(s) as part of the Proposed America's Marine Highway (AMH) corridor that parallels I-95. This is in concert with the Final Rule as published in the Federal Register on April 9, 2010, by the Maritime Administration.

The proposed marine highway project(s) as part of the existing, congested I-95 interstate corridor and could add efficient freight carrying capacity in accordance with the concepts of the US Department of Transportation's "Corridors of the Future" initiative and with the intent of the Energy Independence and Security Act of 2007.

We acknowledge the potential of AMH Program to provide economic growth, mitigate congestion, reduce environmental impacts, enhance safety and reduce energy consumption not only in the Florida region, but also up and down the U.S. East Coast. The importance of this project is far-reaching in within the state in its ability to create jobs and business opportunities.

The designation and development of these AMH projects as program elements of the Proposed AMH corridor that parallels I-95 offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

We appreciate your consideration of this proposal.

Sincerely,

Bill Posey
Bill Posey
Member of Congress

Suzanne M Kosmas
Suzanne Kosmas
Member of Congress

Bill Nelson
Bill Nelson
U.S. Senate

George LeMieux
George LeMieux
U.S. Senate

SPACE COAST TPO

2725 Judge Fran Jamieson Way, Bldg. B
Viera, Florida 32940
Telephone: (321) 690-6890
Fax: (321) 690-6827
www.spacecoasttpo.com

June 2, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

The Space Coast Transportation Planning Organization (TPO) provides this letter as an indication of support for the proposed Port Canaveral to Port of' New Bedford Marine Highway Corridor as envisioned under the Final Rule for the "America's Marine Highway Program" published in the Federal Register on April 9, 2010.

The designation and development of these America's Marine Highway (AMH) projects as program elements of the Proposed AMH corridor that Parallels I-95 at the Port Canaveral to Port of New Bedford Marine Highway could add efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

The Space Coast TPO acknowledges the significant potential of the Marine Highways Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption within Central Florida as well as the U.S. East Coast. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Director
Space Coast Transportation Planning Organization

cc: Kristin Decas, Port of New Bedford Harbor Development Commission
Stan Payne, Canaveral Port Authority

EAST CENTRAL FLORIDA REGIONAL PLANNING COUNCIL

309 Cranes Roost Blvd. Suite 2000 · Altamonte Springs, Fl 32701
Phone (407).262.7772 · Fax (407).262.7788 · www.ecfrpc.org

Philip Laurien, AICP
Executive Director

June 2, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

The East Central Florida Regional Planning Commission (ECFRPC) provides this letter as an indication of support for the proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the Final Rule for the "America's Marine Highway Program" published in the Federal Register on April 9, 2010.

The designation and development of these America's Marine Highway (AMH) projects as program elements of the Proposed AMH corridor that Parallels I-95 at the Port Canaveral to Port of New Bedford Marine Highway could add efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

The ECFRPC acknowledges the significant potential of the Marine Highways Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption within Central Florida as well as the U.S. East Coast. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Phil Laurien, AICP

cc: Kristin Decas, Port of New Bedford Harbor Development Commission
Stan Payne, Canaveral Port Authority

Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE C. KOPELOUSOS
SECRETARY

June 4, 2010

Mr. David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project**
Proposed AMH Corridor parallel to I-95.
Maritime Administration 46 CFR Part 393 –
Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule

Dear Mr. Matsuda:

The Florida Department of Transportation sends this letter in support of the proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the Final Rule for the "America's Marine Highway Program" published in the Federal Register on April 9, 2010.

The designation and development of these AMH projects as program elements of the Proposed AMH corridor that parallels I-95 of the America's Marine Highway Program at the Port Canaveral to the Port of New Bedford could add efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

The Florida Department of Transportation acknowledges the importance of designating Port Canaveral and Port of New Bedford and the overall potential of America's Marine Highway Program to improve safety, reduce environmental impacts, mitigate congestion, and reduce energy consumption. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

SCKopel

Stephanie C. Kopelousos
Secretary

cc: Kristin Decas, Port of New Bedford Harbor Development Commission
Stan Payne, Canaveral Port Authority

I-95 CORRIDOR COALITION

July 10, 2010

Mr. Michael Gordon
Office of Intermodal System Development
USDOT Maritime Administration
1200 New Jersey Avenue SE, Room W21-315
Washington, D. C. 20590

Dear Mr. Gordon:

As you are aware, the I-95 Corridor Coalition has previously submitted an application to US Department of Transportation Maritime Administration pursuant to the America's Marine Highway Program under 46 CFR Part 393, requesting US DOT's designation of the 15 state region from Maine to Florida, including coastal, inland and navigable waterways as a Marine Highway Corridor. As noted in that application, the Marine Highway Program presents a unique opportunity to reduce congestion and alleviate bottlenecks within the I-95 Corridor.

The Corridor's extensive geographic region and surface transportation system is coupled with a strong willingness of the Coalition member agencies and stakeholders to support advancement and implementation of Marine Highway services and development of supporting infrastructure to maximize performance of the region's transportation system. Our research and work with MARAD and public and private sector stakeholders over the past decade has affirmed to us that the potential exists for Marine Highway systems and projects in this Corridor to contribute to transportation solutions to address the congestion and mobility issues we currently face. Enhancements and additions to the Marine Highway System in the I-95 Corridor could result in significant, positive impacts on the performance of the region's transportation system, benefiting the entire U.S. economy while reducing the impacts of freight and transportation on the environment, reducing transportation-related energy consumption and improving transportation safety, security and system resiliency.

Further, with a view towards the needs of the Corridor in the future, the I-95 Corridor Coalition worked with our members to complete a report: "A 2040 Vision for the I-95 Coalition Region – *Supporting Economic Growth in a Carbon-Constrained Environment*." The report outlined several vision principles supporting the belief that the future of this region to 2040 and beyond would be greatly benefited by a truly multi-modal transportation system, including an extensive use of a Marine Highway System, all of which would serve to:

- Sustain and enhance the I-95 regional economic vitality and global competitiveness;
- Support a reduced carbon footprint for the I-95 region; and
- Support seamless integrated Intermodal passenger and freight systems for I-95 corridor region travel.

In response to USDOT 46 CFR Part 393 Final Rule, section 393.4, Marine Highway Projects, it is anticipated from our discussions with our members and stakeholders in the Corridor that one or more submissions will be made requesting designation of Marine Highway Projects by public agencies and their partners within the I-95 Corridor region. As an organization with diverse members and stakeholders, the I-95 Coalition's position is not to endorse or promote any one public agency and/or Marine Highway project application during this solicitation process. However, we can offer our commitment to MARAD to work collaboratively with public agencies and their stakeholders in the Corridor, such as Port of New Bedford, Port of Baltimore and Port Canaveral and their partners, that may be selected for Marine Highway Project designation by USDOT under America's Marine Highway Program. Such work by the Coalition may include the type of activities which were outlined in the Coalition's application for Marine Highway Corridor designation, or as may be mutually determined in consultation with MARAD, our members, stakeholders, and parties who may receive designation for their Marine Highway Corridor Project.

.

The I-95 Corridor region represents over 39% of the US GDP, over 37 % of the nation's population, over 50 coastal and inland ports, numerous access points and terminals for freight and passenger transfer, as well as extensive coastal and inland waterways paralleling and complimenting extensive interstate highways, freight and passenger rail systems. This region would serve as an unparalleled, vibrant, corridor for a robust Marine Highway system and we believe that the designation of Marine Highway Projects in this Corridor will likely serve to maximize US DOT's Marine Highway Program investments.

We look forward to the outcome of this solicitation process and to continued partnership with the Maritime Administration, our members, and stakeholders on this important transportation initiative.

Sincerely,

George E. Schoener

George Schoener
Executive Director

CITY OF NEW BEDFORD

SCOTT W. LANG, MAYOR

June 3, 2010

David Matsuda, Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

I am writing to express the strong support of the City of New Bedford for the proposed Port of New Bedford to Port Canaveral Marine Highway Corridor, as envisioned under the Final Rule for the "America's Marine Highway Program (AMH)" published in the Federal Register on April 9, 2010.

The designation and development of these AMH projects as program elements of the Proposed AMH corridor that Parallels I-95 at the Port of New Bedford and Port Canaveral could add efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

The City of New Bedford acknowledges the importance of designating the Port of New Bedford along with Port Canaveral and the overall potential of the Marine Highways Program to expand our local and regional economies, mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption within Southern Massachusetts as well as the U.S. East Coast. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Scott W. Lang
Mayor

133 WILLIAM STREET • NEW BEDFORD, MA 02740 • TEL. (508) 979.1410 • FAX (508) 991.6189

Commonwealth of Massachusetts

Seaport Advisory Council

40 Center Street
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June 9, 2010

Mr. David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE.
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda,

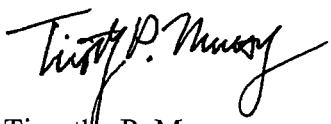
The Massachusetts Seaport Advisory Council sends this letter as an indication of support of the designation of the Port of New Bedford and Port Canaveral Marine Highway Project(s) as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. This is in concert with the Final Rule as published in the Federal Register on April 9, 2010 by the Maritime Administration.

The designation and development of the Port of New Bedford's AMH projects as program elements of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. Having a marine highway corridor running from Port Canaveral to the Port of New Bedford Marine Highway could add efficient freight carrying capacity in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

The Massachusetts Seaport Advisory Council acknowledges the importance of designating the Port of New Bedford as part of the AMH program and the overall potential of the AMH program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption within Massachusetts and the East Coast.

Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Yours truly,



Timothy P. Murray
Lieutenant Governor
Chairman, Seaport Advisory Council
Commonwealth of Massachusetts

cc: Kristin Decas, Port of New Bedford Harbor Development Commission

Stan Payne, Canaveral Port Authority

SOUTHEASTERN REGIONAL PLANNING & ECONOMIC DEVELOPMENT DISTRICT

June 9, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95. Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

The staff of the Southeastern Regional Planning and Economic Development District (SRPEDD) is in full support of the designation of the Port of New Bedford and Port Canaveral Marine Highway Project(s) as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. This is in concert with the Final Rule as published in the Federal Register on April 9, 2010 by the Maritime Administration.

The proposed marine highway project(s) as part of the existing, congested I-95 interstate corridor and could add efficient freight carrying capacity in accordance with the concepts of the US Department of Transportation's "Corridors of the Future" initiative and with the intent of the Energy Independence and Security Act of 2007.

Our agency serves as the support staff to the Metropolitan Planning Organization (MPO) for Southeastern Massachusetts. Our region, and the MPO, includes the port of New Bedford. The plans for adapting the Port of New Bedford and Port Canaveral projects to accommodate AMH Shipping are supported in our Regional Transportation Plan. We have also recently completed a Regional Truck Route Study that has identified future congestion issues and safety hazards on major trucking corridors including our region's three major interstate highways: I-95, I-495 and I-195.

We acknowledge the potential of America's Marine Highway Program to mitigate congestion, reduce environmental impacts, enhance safety and reduce energy consumption not only in our region, but up and down the East Coast.

The designation and development of these AMH projects as program elements of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Stephen C. Smith
Executive Director

cc: Kristin Decas, Port of New Bedford Harbor Development Commission
Stan Payne, Canaveral Port Authority

dcr
Massachusetts

June 10, 2010

David Matsuda
Acting Maritime Administrator
U.S. Department of Transportation
Maritime Administration
West Building
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: **Letter of Support for Marine Highway Project(s) in support of the Proposed AMH Corridor that parallels I-95". Maritime Administration 46 CFR Part 393 - Docket No. MARAD-2010-0035 RIN 2133-AB70 – Final Rule.**

Dear Mr. Matsuda:

New Bedford State Pier sends this letter as an indication of support of the use of the combined Port of Baltimore, Port of New Bedford and Port Canaveral Marine Highway Project as part of the Proposed AMH corridor that Parallels I-95 of the America's Marine Highway Program. We are committed to supporting a service between the Port of Baltimore in the Mid Atlantic U. S., Port Canaveral in the South Atlantic U.S and Port of New Bedford in the Northeast U.S.

New Bedford State Pier is a transportation company that offers our clients and partners the opportunity to drive down supply chain costs and create new markets. Our operations as part of a Marine Highway service allows the port to provide alternative capacity in an underserved and critical lane while having a measurable impact on the environment though dramatically reduced fuel consumption, emissions, and reduced impact on our nation's already strained highway infrastructure. Details of our company can be found at Massachusetts Governors Seaport Advisory Council.

The designation and development of the Port of Baltimore, Port Canaveral and Port of New Bedford combined AMH project as a program element of the Proposed AMH corridor that Parallels I-95 will add terminal capacity and allow New Bedford State Pier to exploit an efficient freight handling program in accordance with the concepts of the U.S. Department of Transportation "Corridors of the Future" initiative and in accordance with the intent of the Energy Independence and Security Act of 2007.

New Bedford State Pier acknowledges the importance of designating the Port of Baltimore, Port Canaveral and Port of New Bedford as part of the AMH program and the overall potential of the AMH program to improve the overall capacity of the national freight transportation system along the U.S. East Coast.

Sincerely,

cc: James J. White, Maryland Port Administration
Kristin Decas, Port of New Bedford Harbor Development Commission
J. Stan Payne, Canaveral Port Authority

Captain Richard R. Cunio 93 State Pier New Bedford, MA 02740 PH: 617-908-7685 NBS.Pier@state.ma.us

Appendix D
AMH I-95 Corridor Services Project Cost Savings and Public Benefits – Supporting Tables

Congestion Reduction Numbers

Truck Cargos between Port Canaveral (FL), New Bedford (NE), and Baltimore (MD)

		Annual Total Truckloads (Thousands)	Allocation Truck (%)	Diverted Goods (%)	Annual Diverted Truckloads (Thousands)	Route Miles (Miles)	Route Miles Saved (VMT)	Standard Rate 0.192 ($/mile)	Congestion Cost ($)
Truck Cargo	Northbound FL to NE	1087	49.51	23	123.8	1300.0	160,913,936	0.192	$30,895,476
	Southbound NE to FL	417	49.51	25	51.6	1300.0	67,098,428	0.192	$12,882,898
	Northbound MD to NE	895	49.51	23	101.9	400.0	40,766,534	0.192	$7,827,175
	Southbound NE to MD	527	49.51	25	65.2	400.0	26,091,770	0.192	$5,009,620
	Northbound FL to MD	2716	49.51	23	309.3	900.0	278,351,161	0.192	$53,443,423
	Southbound MD to FL	2134	49.51	25	264.1	900.0	237,722,265	0.192	$45,642,675
			Total		916.0		810,944,094		$155,701,266

Notes and assumptions:

1. Did not include passengers in this calculation
2. Used 49.51% truck and 50.49% rail to allocate cargo from total
3. Capture 23% of NB and 25% of SB
4. Used 1300 miles total distance port to port

Emissions Benefits

Truck Cargos between Port Canaveral FL), New Bedford (NE), and Baltimore (MD)

		Route Miles Saved (VMT)	Average Cargo Volume (tons)	Annual Ton-Miles	Annual metric ton-km	Emission Rate (g/mton-km)	CO_2 Emissions (metric ton)	CO_2 Credit ($/metric ton)	CO_2 Cost ($)
Truck Cargo	Northbound FL to NE	160,913,936	12	1,930,967,236	2,819,212,164	92	259,368	15	$3,890,513
	Southbound NE to FL	67,098,428	12	805,181,130	1,175,564,450	92	108,152	15	$1,622,279
	Northbound MD to NE	40,766,534	12	489,198,408	714,229,676	92	65,709	15	$985,637
	Southbound NE to MD	26,091,770	12	313,101,240	457,127,810	92	42,056	15	$630,836
	Northbound FL to MD	278,351,161	12	3,340,213,934	4,876,712,344	92	448,658	15	$6,729,863
	Southbound MD to FL	237,722,265	12	2,852,667,180	4,164,894,083	92	383,170	15	$5,747,554
	Total	810,944,094					1,307,112		$19,606,682
Barge	Cumulative			9,731,329,128	14,207,740,527	13.9	197,488	15	$2,962,314
						CO_2 Savings	1,109,625		$16,644,368

Fuel Conservation

Truck Cargos between Port Canaveral FL), New Bedford (NE), and Baltimore (MD)

		Route Miles Saved (VMT)	Average Cargo Volume (tons)	Annual Ton-Miles	Fuel Efficiency (ton-miles/gal)	Gallons Saved (gal)
Truck Cargo	Northbound FL to NE	160,913,936	12	1,930,967,236	155	12,457,853
	Southbound NE to FL	67,098,428	12	805,181,130	155	5,194,717
	Northbound MD to NE	40,766,534	12	489,198,408	155	3,156,119
	Southbound NE to MD	26,091,770	12	313,101,240	155	2,020,008
	Northbound FL to MD	278,351,161	12	3,340,213,934	155	21,549,767
	Southbound MD to FL	237,722,265	12	2,852,667,180	155	18,404,304
		810,944,094				62,782,769
Barge	Cumulative			9,731,329,128	576	16,894,669
				Net Gallons Saved		45,888,100

Landside Infrastructure Maintenance Savings
Truck Cargos between Port Canaveral FL), New Bedford (NE), and Baltimore (MD)

		Route Miles Saved (VMT)	Maintenance Cost ($/Mile)	Maintenance Savings ($)
Truck Cargo	Northbound FL to NE	160,913,936	0.24	$38,619,345
	Southbound NE to FL	67,098,428	0.24	$16,103,623
	Northbound MD to NE	40,766,534	0.24	$9,783,968
	Southbound NE to MD	26,091,770	0.24	$6,262,025
	Northbound FL to MD	278,351,161	0.24	$66,804,279
	Southbound MD to FL	237,722,265	0.24	$57,053,344
		Total Maintenance Savings		$194,626,583

Assumptions:
1. No Railroad savings projected
2. Use $0.24 per truck mile

Safety Improvements
Truck Cargos between Port Canaveral FL), New Bedford (NE), and Baltimore (MD)

		Annual Ton-Miles	Billion Ton-Miles	Fatality Rate (Deaths/ Billion Ton-miles)	Number Fatalities	Injury Rate (Injuries/ Billion ton-miles)	Number Injuries	Spill Rate (Gallons/ Million Ton-miles)	Spill Volumes
Truck Cargo	Northbound FL to NE	1,930,967,236	1.930967236	4.351	8	99.044	191	6.06	11,702
	Southbound NE to FL	805,181,130	0.80518113	4.351	4	99.044	80	6.06	4,879
	Northbound MD to NE	489,198,408	0.489198408	4.351	2	99.044	48	6.06	2,965
	Southbound NE to MD	313,101,240	0.31310124	4.351	1	99.044	31	6.06	1,897
	Northbound FL to MD	3,340,213,934	3.340213934	4.351	15	99.044	331	6.06	20,242
	Southbound MD to FL	2,852,667,180	2.85266718	4.351	12	99.044	283	6.06	17,287
			Subtotal		42		964		58,972
Barge	Cumulative	9,731,329,128	9.731329128	0.028	0.3	0.045	0.4	3.6	35,033
			Lives Saved		42				
			Injuries Prevented				963		
			Spill Volume Prevented						23,939

Appendix E
Discussions with MARAD in May 2008 concerning the Designation of the I-95 AMH Corridor

CANAVERAL
PORT AUTHORITY

May 6, 2009

Noel P. Comeaux, AICP, PMP
Transportation Industry Analyst
Office of Marine Highways and Passenger Services
United States Department of Transportation
Maritime Administration
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

RE: MARAD-2008-0096 – Corridor Request Clarification Response

Dear Mr. Comeaux:

We are in receipt of your letter dated April 6, 2009 (attached) requesting additional information pertaining to our original marine highway corridor designation request.

In order to facilitate an adequate review of the application, we have revisited the original request and developed some estimates of passengers and freight activity and their respective impacts on the requested parameters. This information is enclosed.

We hope that you find the enclosed analysis acceptable and further hope that MARAD rules favorably on our marine highway corridor request. We feel strongly that Port Canaveral and the Port of New Bedford offer an opportunity for a viable marine highway service that has significant potential to help meet current and long-term transportation needs along the east coast.

Please let us know if you have any questions or need additional clarification.

Sincerely,

Wade W. Morefield, AICP
Director of Planning

cc: Lauren Brand, MARAD South Atlantic Gateway Director

Attachment (1) April 6 letter requesting additional clarification

Enclosures (2): Clarification response
Elderly Migration Study

Port Canaveral
445 Challenger Road P.O. Box 267 Cape Canaveral, Florida 32920 USA
321 783 7831 888 767 8226 www.portcanaveral.org

U.S. Department
of Transportation

**Maritime
Administration**

1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

April 6, 2009

Mr. Wade W. Morefield, AICP
Director of Planning
Canaveral Port Authority
445 Challenger Road
PO Box 267
Cape Canaveral, Florida 32920

RE: MARAD-2008 0096 – Corridor Request

Dear Mr. Morefield:

Thank you for submitting your recommendation to designate a marine highway corridor from Port of New Bedford, Massachusetts, to Port Canaveral, Florida, as defined by the Energy Independence and Security Act of 2007 and Federal Register notice MARAD-2008 0096.

The Office of Marine Highways & Passenger Services is leading the effort to extend the surface transportation system to commercially navigable waterways throughout the United States for both passenger (ferry) and freight services. This means that we hope to help incorporate the corridor you recommend into your local, regional and/or state transportation improvements plan(s), thereby helping improve local, regional and state air quality, vehicular congestion, and even save lives by virtually reducing the number of vehicles on the affected U.S. roadways.

To completely provide an accurate understanding of your corridor and review each application in detail, we ask that you clarify your request. Per MARAD-2008 0096, each corridor request should include seven parameters:

1. Physical description of proposed marine highway corridor
2. Surface transportation corridor served
3. Involved parties
4. Passengers and freight
5. Congestion reduction
6. Public environmental, energy or safety benefits
7. Impediments

We ask that you give us an estimate of expected freight in the corridor, if based on previous services or even modal diversion and provided in a range. This estimate therefore feeds into congestion reduction and environmental benefits (i.e., emission reduction) based on, for example, "A Modal Comparison of Domestic Freight Transportation Effects on the General Public" (December 2007) by the Texas Transportation Institute. Without this information, we are unable to fairly consider each request in contrast to one another.

Should you have any questions, please contact Lauren Brand, Director of the Maritime Administration's South Atlantic Gateway Office, at (305) 890-6016, or Bob McKeon, Director of the Maritime Administration's North Atlantic Gateway Office, at (212) 668-3330. The Maritime Administration is here to answer any questions you have!

Thank you,

Noël P. Comeaux, AICP, PMP
Transportation Industry Analyst
Office of Marine Highways & Passenger Services
U.S. Maritime Administration

CLARIFICATION OF CORRIDOR DESIGNATION REQUEST
Port Canaveral, FL – Port of New Bedford, MA Marine Highway

1. PHYSICAL DESCRIPTION OF PROPOSED MARINE HIGHWAY CORRIDOR

The proposed marine highway corridor consists of the Atlantic coastal shipping lane between Port Canaveral, Florida and the Port of New Bedford, Massachusetts (EXHIBIT #1). This direct corridor is approximately 1,000 miles long. The proposed corridor also includes the "hubs" at either end comprised of berths and landside cargo and passenger facilities at both seaports.

2. SURFACE TRANSPORTATION CORRIDOR SERVED

The primary surface transportation corridor served by the Canaveral-New Bedford marine highway is the I-95 Interstate Highway corridor from Florida to Massachusetts. (also shown on EXHIBIT #1). The estimated length of this interstate highway route is 1,300 miles.

3. INVOLVED PARTIES

At this preliminary stage, the involved parties are primarily the seaport administrative and planning staff at both Port Canaveral and the Port of New Bedford.

Letters of support have been obtained from several potential partners including the Florida Department of Transportation (both state and district offices), the local Transportation Planning Organization (TPO/MPO), and the local economic development commission (EDC). It is anticipated that all of these organizations would be involved, to some extent, in the development of the marine highway. (EXHIBITS #2 through #7)

Port Canaveral and the Massachusetts Seaport Advisory Council have previously entered into a Memorandum of Cooperation regarding potential development of the marine highway (formerly Short Sea Shipping). The two organizations remain closely aligned in their primary objective to facilitate development and use of the marine mode for freight and passenger transportation between their respective regions. (EXHIBIT #8)

4. PASSENGERS AND FREIGHT

Per the request from MARAD for additional clarification, we have attempted to quantify potential benefits of the proposed marine highway between Port Canaveral and the Port of New Bedford based on reasonable estimates of potential passenger and freight activity. In both cases, benefits are derived as a share of existing commerce between the two regions as documented below.

Passengers

Passenger activity estimates are based on a conceptual cruiseferry operation between Port Canaveral (serving Florida) and the Port of New Bedford (serving the U.S. Northeast Atlantic states and Canada). The cruiseferry service would be modeled on successful European North Sea and Baltic services (see EXHIBIT #9 for comparable European service).

The initial passenger market for a marine highway cruiseferry service is based on seasonal resident migrations (snowbirds/sunbirds) between the Northeast Atlantic U.S./Canadian regions and Florida. This activity is documented in a 2006 study[1] by University of Florida's Bureau of Economic and Business Research. A copy of the study is enclosed. The estimated potential diversion from I-95 to the marine highway is shown below in TABLE 1.

Port Canaveral has a considerable presence in the cruise industry and experience in cruise marketing and tourism sectors which can be leveraged to support development of a sustainable cruiseferry service along the U.S. eastern seaboard.

It is understood that any new cruiseferry operation will require the use of American shipyards to construct or renovate/reflag an acceptable vessel. The Title XI loan program could be considered to facilitate the construction or reflagging costs. An operating model for the service has not been developed, but such a service could be private, public, or a public-private partnership (PPP).

TABLE 1

POTENTIAL PASSENGER ACTIVITY	
Florida "Snowbirds"[2]	937,000
Florida "Sunbirds"	375,000
Total "Migratory" Population	1,312,000
Percent from Canada and Northeast U.S.	47.2%
Potential FL-NE Cruiseferry Market	619,264
Anticipated Initial Market Capture	30.0%
Estimated Initial Cruiseferry Passengers (one way)	**185,779**
Estimated Automobile Diversions from I-95 (one way)*	92,890
Total Estimated Automobile Diversions (two way)	**185,779**

*-Assume 2 passengers per automobile

[1] "Snowbirds, Sunbirds, and Stayers: Seasonal Migration of Elderly Adults in Florida", a 2006 study published in the Journal of Gerontology, Vol. 61B, No. 5, pages S232-S239, by Stanley K. Smith and Mark House of the University of Florida Bureau of Economic and Business Research (BEBR).
[2] Ibid.

It is important to note that the cruiseferry business model would likely attract other leisure travelers and even commercial cargo traffic (trucks). Large cruiseferries typically offer a wide assortment of amenities consistent with modern cruise ships (see EXHIBIT #9) that historically have not served domestic routes. Additional traffic stimulated by the availability of regular east coast cruiseferry service, and the benefits of this diversion have *not* been estimated.

Freight

Freight activity estimates are based on a simple diversion of existing inter-regional trucking and rail activity between both Florida and New Haven, Connecticut and Florida and the larger Northeast region. These two geographic hinterlands have been used because the data was readily available in a MARAD sourced analysis[3] and they are both applicable to the proposed Port Canaveral to Port of New Bedford marine highway.

The overall freight diversion rate has been estimated at 24% of the existing truck and rail activity. This rate is the average of the estimated 23% northbound diversion and 25% southbound diversion rates used by the 2006 Short-Sea Shipping Business Case Analysis prepared for MARAD by Global Insight and Reeve and Associates.

TABLE 2
DIVERTED FL-NEW HAVEN CT TRAFFIC

EXISTING TRUCK AND RAIL TRAFFIC BETWEEN FLORIDA (FL) AND *CONNECTICUT (CT)* (Truckloads)		
Existing Truck Traffic (49.51%)	**Annual**	**Diverted Annually (24%)**
FL to CT	174,470	**41,873**
CT to FL	137,605	**33,025**
SUBTOTAL TRUCK	312,075	**74,898**
Existing Rail Intermodal Traffic (50.49%)		
FL to CT	177,755	**42,661**
CT to FL	140,525	**33,726**
SUBTOTAL RAIL	318,280	**76,387**
TOTAL TRUCK AND INTERMODAL RAIL UNITS	630,355	**151,285**

[3] "Four Corridor Case Studies of Short-Sea Shipping Service", a study submitted to the US Maritime Administration by Global Insight and Reeve and Associates, August 2006, MARAD Ref.#DTOS59-04-Q-0069

TABLE 3
DIVERTED REGIONAL TRAFFIC

EXISTING INTER-REGIONAL TRUCK AND INTERMODAL TRAFFIC BETWEEN FLORIDA (FL) AND *NEW ENGLAND (N.E.)* (Truckloads)		
EXISTING TRUCK *AND* RAIL VOLUME	**Annual**	**Diverted Annually (24%)**
FL to N.E.	417,000	**100,080**
N.E. to FL	1,087,000	**260,880**
TOTAL TRUCK AND INTERMODAL RAIL UNITS	1,504,000	**360,960**

TABLE 4
DIVERTED TONNAGE AND TONMILES

TONNAGE (est. 25 tons ea. unit)	**Annual**	**Diverted Annually**
FL-CT	15,758,875	**3,782,130**
FL-NEW ENGLAND	37,600,000	**9,024,000**
TON MILES (est. 1,000 mile corridor)		
FL-CT	15,758,875,000	**3,782,130,000**
FL-NEW ENGLAND	37,600,000,000	**9,024,000,000**

5. CONGESTION REDUCTION

Precise determination of congestion reduction offered by the proposed marine highway service is beyond our capabilities. Congestion levels vary considerably along the I-95 corridor by geography, time of day, and day of the week. Therefore, it is best to simply estimate the total volume of trucks, intermodal units, and private automobiles that could be diverted from the highway and rail lines. These volumes are shown on TABLE 2 and TABLE 3 above and summarized below in TABLE 5.

TABLE 5
TOTAL AUTOS, TRUCKS, INTERMODAL DIVERSIONS

Automobiles Diverted		**185,779**	
Trucks Diverted			
	FL to CT	**74,898**	
	FL to N.E. Region		**180,480**
Rail Units Diverted			
	FL to CT	**76,387**	
	FL to N.E. Region		**180,480**

*-FL to N.E. region mode split is based on the 50-50 split documented in the 2006 Short Sea Shipping Business Case Analysis prepared for MARAD by Global Insight and Reeve and Associates.

6. PUBLIC ENVIRONMENTAL, ENERGY, OR SAFETY BENEFITS

Based on the volumes estimated above, additional estimates of benefits related to energy, environment, and safety can be derived. The estimates in TABLE 6 through TABLE 10 are based on data contained in a previously published MARAD document[4] and other sources as referenced.

TABLE 6
FUEL SAVINGS

FUEL SAVINGS (assumes 50-50 modal split between rail intermodal and truck) (Gallons)

FREIGHT	FL-CT	FL-N.E. REGION
Truck Fuel Used (155 tonmiles/gallon)	12,200,419	29,109,677
Rail Fuel Used (413 tomiles/gallon)	4,578,850	10,924,939
Total Fuel Use Diverted to Barge/Ship	16,779,269	40,034,617
Barge/Ship Fuel Use (576 tonmiles/gallon)	6,566,198	15,666,667
TOTAL FUEL SAVINGS OF DIVERTED CARGO	**10,213,071**	**24,367,950**
PASSENGER		
Automobile Fuel Used (assumes 25 mpg)		7,431,200
Barge/Ship Fuel Used (assumes 2 tons per auto)*		161,267
TOTAL FUEL SAVINGS OF DIVERTED AUTOS*		**7,269,933**

*- The Barge/Ship fuel calculation is based solely on the amount of fuel needed to accommodate the equivalent tonnage of the passenger automobiles. This calculation does NOT include any additional fuel for regular ferry operations between FL and the N.E. and is intended to document only the relative fuel savings of moving the automobiles 1,000 miles over water instead of driving them an average of 1,000 miles on I-95.

[4] "Modal Comparison of Domestic Freight Transportation Effects on the General Public", a study submitted to the US Maritime Administration by Texas Transportation Institute, December 2007.

TABLE 7
EMISSIONS

FREIGHT EMISSIONS REDUCTION* (tons)		HC	CO	NOx	PM
1	Truck Emissions				
	FL-CT	42	283	1,526	38
	FL-N.E. REGION	99	676	3,641	90
2	Rail Emissions				
	FL-CT	50	134	1,361	34
	FL-N.E. REGION	120	320	3,248	81
	TOTAL				
3	TRUCK/RAIL				
	FL-CT	92	418	2,887	71
	FL-N.E. REGION	220	996	6,889	170
	Barge/Ship				
4	Emissions				
	FL-CT	72	193	1,956	49
	FL-N.E. REGION	173	460	4,666	116
TOTAL FREIGHT REDUCTION					
	FL-CT	**20**	**225**	**932**	**23**
	FL-N.E. REGION	**47**	**537**	**2,223**	**55**

AUTO EMISSIONS REDUCTION** (tons)		HC	CO	NOx
1	Auto Emissions	573	4,280	285
	Barge/Ship			
2	Emissions	7	19	192
TOTAL AUTO REDUCTION		**566**	**4,261**	**93**

*-Freight emissions data was sourced from the Texas Transportation Institute's 2007 *Modal Comparison of Domestic Freight Transportation, Effects on the General Public* document produced for MARAD.

**-Average automobile emission data was sourced from the U.S. Environmental Protection Agency's *Emission Facts: Average Annual Emissions and Fuel Consumption for Passenger Cars and Light Trucks*, EPA420-F-00-013, April 2000.

TABLE 8
SPILLS AVOIDED

SPILLS AVOIDED (Gallons)	Spills (Gallons per Million Tonmiles)	M Ton-Miles FL-CT	M Ton-Miles FL-NE	Gallons Spilled FL-CT	Gallons Spilled FL-NE
Truck	6.06	1,891	4,512	11,460	27,343
Rail	3.86	1,891	4,512	7,300	17,416
SUBTOTAL				18,759	44,759
Barge	3.60	3,782	9,024	13,616	32,486
AVOIDED SPILLS (Gallons/Yr.)				**5,144**	**12,273**

TABLE 9
INJURIES AVOIDED

INJURIES AVOIDED	Injury Rate (per Billion Ton-Miles)	B Ton-Miles FL-CT	B Ton-Miles FL-NE	Injuries FL-CT	Injuries FL-NE
Truck	99.044	1.891	4.512	187	447
Rail	5.814	1.891	4.512	11	26
SUBTOTAL				198	473
Barge	0.045	3.782	9.024	0	0
AVOIDED INJURIES (annual)				**198**	**473**

TABLE 10
DEATHS AVOIDED

DEATHS AVOIDED	Death Rate (per Billion Ton-Miles)	B Ton-Miles FL-CT	B Ton-Miles FL-NE	Deaths FL-CT	Deaths FL-NE
Truck	4.351	1.891	4.512	8	20
Rail	0.649	1.891	4.512	1	3
SUBTOTAL				9	23
Barge	0.028	3.782	9.024	0	0
AVOIDED DEATHS (annual)				**9**	**22**

7. IMPEDIMENTS

There are several impediments to the creation and utilization of the proposed marine highway corridor which manifest differently for passenger and freight transport. However, these impediments share a common factor that generally pertains to a lack of public awareness regarding the potential benefits of the marine mode and the historical effectiveness of marine transport as it relates to both capacity and efficiency.

Passenger Impediments

The primary impediments to the marine highway passenger component are a lack of suitable U.S. flagged vessels, a general perception that the use of a U.S. crew will make any proposed U.S. coastal ferry service cost prohibitive, and a lack of American business experience with cruiseferry operations.

Freight Impediments

The primary impediment to the freight component of the marine highway is reluctance on the part of shippers and shipping companies to alter existing business and logistics models. Shippers seem willing to pay a premium for the convenience of maintaining established, proven shipping practices. Only when the cost of the existing practice rises significantly (as it did in 2008 when diesel prices spiked to more than $4 per gallon) do shippers and shipping companies become motivated to consider alternatives to the status quo. As fuel prices fell again, the motivation to improve efficiency by investing in a new business and logistics model was lost.

America's Marine Highway Program

PROPOSED MARINE HIGHWAY CORRIDOR
Port Canaveral, Florida to Port of New Bedford, Massachusetts

EXHIBIT 1

2725 Judge Fran Jamieson Way, Bldg. B
Viera, Florida 32940
Telephone: (321) 690-6890
Fax: (321) 690-6827
www.spacecoasttpo.com

February 12, 2009

James Caponiti, Acting Administrator
US DOT/Maritime Administration
Room W22-318, MAR-100
1200 New Jersey Ave, SE
Washington, DC 20590-0001

RE:SUPPORT FOR MARINE HIGHWAY CORRIDOR DESIGNATION

Sir:

The Space Coast Transportation Planning Organization (TPO) provides this letter as an indication of support for a proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the interim final rule for the "*America's Marine Highway Program*" published in the Federal Register on October 9, 2008.

The proposed Port Canaveral to Port of New Bedford Marine Highway parallels the existing, congested I-95 interstate corridor and adds efficient freight and passenger carrying capacity in accordance with the concepts of the "Corridor of the Future" initiative and the intent of the Energy Independence and Security Act of 2007.

The Space Coast TPO acknowledges the significant potential of the Marine Highways Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Larry L. Schultz, Chairman
Space Coast Transportation Planning Organization

EXHIBIT 2

BILL POSEY

FINANCIAL SERVICES

HOUSE AEROSPACE CAUCUS

REPUBLICAN STUDY COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515

March 2, 2009

Mr. James, Caponiti, Acting Administrator
US DOT/Maritime Administration
Room W22-318, MAT-100
1200 New Jersey Ave., SE
Washington, DC 20590-0001

REF: MARINE HIGHWAY COORIDOR DESIGNATION

Dear Mr. Caponiti,

This letter is provided as an indication of support for a proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the interim final rule for the *"America's Marine Highway Program"* published in the Federal Register on October 9, 2008.

The proposed Port Canaveral to Port of New Bedford Marine Highway parallels the existing, congested I-95 interstate corridor and adds efficient freight and passenger carrying capacity in accordance with the concepts of the U.S. Department of Transportation *"corridors of the Future"* initiative and the intent of the Energy Independence and Security Act of 2007.

The proposed Marine Highway Corridor offers significant potential to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system. Any consideration you may give to this proposal will be greatly appreciated by my constituents.

Sincerely,

Bill

Bill Posey
Member of Congress

BP/pdg

East Central Florida Regional Planning Council

Resolution #01 -2009

Resolution in Support of
A Proposed Port Canaveral to Port of New Bedford
Marine Highway Corridor

WHEREAS, the proposed Florida to Maine Marine Highway parallels the existing, congested I-95 corridor and adds efficient freight and passenger carrying capacity, in accordance with the concepts of the U.S. Department of Transportation Corridors of the Future initiative and the intent of the Energy Independence and Security Act of 2007; and

WHEREAS, the East Central Florida Regional Planning Council acknowledges the significant potential of the Marine Highway Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption; and

WHEREAS, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system and enhance the economic competitiveness in the world's market of industries located on the East Coast of the United States.

NOW, THEREFORE, BE IT RESOLVED by a vote of the membership, the East Central Florida Regional Planning Council supports a proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the interim final rule for the "America's Marine Highway Program" published in the Federal Register on October 9, 2008.

DONE AND RESOLVED this 18th day of March, 2009.

ECFRPC Chairman
Malcolm McLouth

Date: 3-18-09

ECFRPC Executive Director
Phil Laurien

Date: 3-18-09

EXHIBIT 4

ECONOMIC DEVELOPMENT COMMISSION
OF FLORIDA'S SPACE COAST

March 12, 2009

James Caponiti, Acting Administrator
US DOT/Maritime Administration
Room W22-318, MAR-100
1200 New Jersey Ave, SE
Washington, DC 20590-0001

RE: MARINE HIGHWAY CORRIDOR DESIGNATION SUPPORT

Dear Sir:

The Economic Development Commission of Florida's Space Coast (EDC) provides this letter as an indication of support for a proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the interim final rule for the "*America's Marine Highway Program*" published in the Federal Register on October 9, 2008.

The proposed Port Canaveral to Port of New Bedford Marine Highway parallels the existing, congested I-95 interstate corridor and adds efficient freight and passenger carrying capacity in accordance with the concepts of the U.S. Department of Transportation "*Corridors of the Future*" initiative and the intent of the Energy Independence and Security Act of 2007.

The EDC acknowledges the significant potential of the Marine Highways Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Lynda Weatherman
President & CEO

597 Haverty Court, Suite 100
Rockledge, Florida 32955
Phone: (321) 638.2000
Toll-Free: (800) 535.0203
Fax: (321) 633.4200
www.SpaceCoastEDC.org

EXHIBIT 5

Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

STEPHANIE C. KOPELOUSOS
SECRETARY

March 13, 2009

James Caponiti, Acting Administrator
US DOT/Maritime Administration
Room W22-318, MAR-100
1200 New Jersey Ave, SE
Washington, DC 20590-0001

RE: Marine Highway Corridor Designation Support

Dear Administrator Caponiti:

The Florida Department of Transportation sends this letter as an indication of support for the proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the interim final rule for the *"America's Marine Highway Program"* published in the Federal Register on October 9, 2008.

The proposed Port Canaveral to Port of New Bedford Marine Highway parallels the existing, congested I-95 interstate corridor and could add efficient freight and passenger carrying capacity in accordance with the concepts of the U.S. Department of Transportation *"Corridors of the Future"* initiative and the intent of the Energy Independence and Security Act of 2007.

The Florida Department of Transportation acknowledges the potential of the Marine Highways Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Noranne Downs

Noranne Downs, P.E.
District Five Secretary

EXHIBIT 6

Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE C. KOPELOUSOS
SECRETARY

March 12, 2009

Mr. James Caponiti
Acting Administrator
Maritime Administration
United States Department of Transportation
Room W22-318, MAR-100
1200 New Jersey Ave, SE
Washington, DC 20590-0001

RE: MARINE HIGHWAY CORRIDOR DESIGNATION SUPPORT

Dear Administrator Caponiti:

The Florida Department of Transportation sends this letter as an indication of support for the proposed Port Canaveral to Port of New Bedford Marine Highway Corridor as envisioned under the interim final rule for the "*America's Marine Highway Program*" published in the Federal Register on October 9, 2008.

The proposed Port Canaveral to Port of New Bedford Marine Highway parallels the existing, congested I-95 interstate corridor and could add efficient freight and passenger carrying capacity in accordance with the concepts of the U.S. Department of Transportation "*Corridors of the Future*" initiative and the intent of the Energy Independence and Security Act of 2007.

The Florida Department of Transportation acknowledges the potential of the Marine Highways Program to mitigate congestion, reduce environmental impacts, improve safety, and reduce energy consumption. Furthermore, the program offers an opportunity to provide a substantial, sustainable improvement in the overall capacity of the national freight transportation system.

Sincerely,

Stephanie C. Kopelousos
Secretary

SCK/md

EXHIBIT 7

Memorandum of Cooperation

BETWEEN

Port Canaveral, Florida

as represented by

For the Canaveral Port Authority
Chairman of Board of Commissioners,
Tom Goodson

AND

The Ports of Massachusetts
The Seaport Advisory Council

as represented by

The Honorable Timothy P. Murray, Lieutenant Governor
The Commonwealth of Massachusetts
Chair, of the Seaport Advisory Council

For the Port of New Bedford
Mayor Scott W. Lang

For the Port of Gloucester
Mayor John Bell

For the Port of Fall River
Mayor Edward Lambert

And

For the Port of Salem
Mayor Kimberley Driscoll

EXHIBIT 8

RECITALS

WHEREAS:

I. The parties to this Memorandum of Cooperation consider cooperation and leadership as essential for undertaking new strategies to stimulate port development and in particular those strategies related to Coastal Shipping Activities (Short Sea Shipping) for the ports of New Bedford, Gloucester, Fall River and Salem, Massachusetts and Port Canaveral, Florida; and

II. The Ports of New Bedford, Gloucester, Fall River and Salem and Port Canaveral recognize the value of partnerships in port development and

III. Development of seaports and supporting the needs of surrounding communities are an absolute priority of all the organizations; and

IV. Port Canaveral is mandated to support, manage, and facilitate the development and growth of the port to accommodate the needs of business, residents and industry through the encouragement of diverse marine industries and development of a safe, secure and efficient marine operation; and is committed to the encouragement of the emerging coastal shipping network;

V. The Port of New Bedford, Gloucester, Fall River and Salem are mandated to support, manage, and facilitate the development and growth of the port to accommodate the needs of business, residents and industry through the encouragement of diverse marine industries and development of a safe, secure and efficient marine operation; and are committed to the encouragement of the emerging coastal shipping network;

VI. Recognizing the beneficial similarities of our smaller municipal ports, the parties wish to maintain a dialogue and encourage cooperative efforts so as to maintain secure port operations and mutual promotion of all five ports as centers of commerce and tourism and do all the parties can do to mutually encourage domestic movements of Cargo between the five Ports.

The parties to this Memorandum of Cooperation agree to the following:

1.0 Purpose

The purpose of this Memorandum of Cooperation is to set up a cooperative framework between Port Canaveral and the Ports of New Bedford, Gloucester, Fall River and Salem within their respective jurisdictions and mandates.

2.0 Principles

2.1 Within the framework of this memorandum, cooperation between the parties will reflect the following principles:

2.1.1 Port Canaveral and the Ports of New Bedford, Gloucester, Fall River and Salem will work in full cooperation to foster port development that respects the mandate of their respective organizations;

2.1.2 Port Canaveral and the Ports of New Bedford, Gloucester, Fall River and Salem believe in the importance of creating a Short Sea network as a compliment to the I-95 Corridor which will become essentially dysfunctional with the expected doubling of domestic freight moves in the next ten years. And further, the parties believe they have an essential and crucial roll in the development of the Short Sea network and intend to do all possible together, jointly, and individually to make it happen.

3.0 Joint Collaboration

3.1 Port Canaveral and the Ports of New Bedford, Gloucester, Fall River and Salem will, through their representatives, share information of their respective programs, initiatives, projects and services to promote port development according to their organization's mandate; and

3.2 Where appropriate, both organizations will foster port development activities separately or jointly, as agreed by both parties; and

3.3 Both organizations will ensure the establishment of a mechanism for liaising according to a regular schedule, to identify the needs of their respective clientele and

3.4 Both organizations will mutually communicate public information on studies, analyses, and evaluations of port development to ensure efficient and judicious use of financial and human resources and to enhance port development in the jurisdictions each organization is mandated to serve; and

3.5 An option is provided to add one or more ports, should the signing parties determine that their inclusion would better achieve the purposes of the Memorandum of Cooperation (MOC); should this occur, the present MOC shall become null and void, and a new MOC will be drafted to include all present and additional signing parties.

4.0 Mandate

4.1 As partners in promoting port development, and respecting their mandate; Port Canaveral and the Ports of New Bedford, Gloucester, Fall River and Salem shall seek to orient policies, programs, and services to ensure that these policies foster the development and vitality of the ports. To this end, the parties to this MOC will:

a) Improve communications and liaison on programs, projects and services; and

b) Facilitate local or regional projects and initiatives to develop the economy of Port Canaveral and Ports of New Bedford, Gloucester, Fall River and Salem; and

c) Develop "Port Pairing" opportunities that will better foster the encouragement of Short Sea Shipping and lead to a Short Sea network beneficial to all parties and the economic development and transportation goals in the several regions; and

d) Facilitate the activities of private sector and community organizations to promote concerted action in port development; and

e) Jointly identify and inform government departments and agencies about the needs of both ports and explore possibilities for accessing various government programs that could impact on the ports; and

f) Jointly explore the application of federal, state, provincial, regional and municipal resources to facilitate the identified needs of Port Canaveral and the Ports of New Bedford, Gloucester, Fall River and Salem.

This Memorandum of Cooperation signed and sealed on [illegible] at Boston, Massachusetts and Port Canaveral, Florida.

For the Ports of New Bedford, Gloucester, Fall River and Salem:

Witness

Honorable Timothy P. Murray
Lieutenant Governor, State of Massachusetts

Witness

Mayor Scott W. Lang
Port of New Bedford

Witness

Mayor John Bell
Port of Gloucester

Witness

Mayor Edward Lambert
Port of Fall River

Witness

Mayor Kimberley Driscoll
Port of Salem

For Port Canaveral:

Witness

Chairman of Board of Commissioners
For the Canaveral Port Authority
Tom Goodson

MS Pride of Bilbao

From Wikipedia, the free encyclopedia

MS *Pride of Bilbao* is a cruiseferry owned by Irish Ferries and operated by P&O Ferries on their Portsmouth—Bilbao service. She was built in 1986 as **MS *Olympia*** by the Wärtsilä shipyard in Turku, Finland for Rederi AB Slite, Sweden for use in Viking Line traffic.[1]

Contents

Brief history

Olympia was built by the Wärtsilä Shipyard in Turku, Finland, for Rederi AB Slite. The ship was launched on 26 April, 1986 under the name *Olympia*, and operated between Stockholm and Helsinki for Viking Line. *Olympia* was built as a sister ship to MS *Mariella*.

A model of MS *Olympia* as she appeared during her service with Viking Line.

In 1993 Rederi AB Slite suffered financial problems and was forced to declare bankruptcy. *Olympia* was sold to Irish Continental Group and chartered to P&O European Ferries who renamed her the *Pride of Bilbao*.

As of 1994, *Pride of Bilbao* has been registered in Portsmouth.

In 2002 she received a major refurbishment, during which the vast majority of public spaces were updated and brought in line with P&O Ferries' new

MS *Pride of Bilbao* leaving Portsmouth harbour in July 2003

Career

Name:	1986—1993: MS *Olympia* 1993 onwards: **MS *Pride of Bilbao***[1]
Owner:	1986—1993: Rederi AB Slite 1993 onwards: Irish Ferries[1]
Operator:	1986–1993: Rederi AB Slite (in Viking Line traffic) 1993 onwards: P&O Ferries[1]
Port of Registry:	1986–1993: Slite, Sweden 1993—1994: Nassau, Bahamas 1994-2008: Portsmouth, United Kingdom[1] 2008 onwards: Nassau, Bahamas[2]
Route:	Portsmouth—Bilbao (as of 2009)
Builder:	Wärtsilä Turku, Finland[1]
Yard number:	1290[1]
Launched:	31 August 1985[1]
Acquired:	26 April 1986[1]
In service:	29 April 1986[1]
Identification:	IMO number 8414582[1]
Status:	In service

General characteristics (as built)[1]

Class and type:	*Mariella*-class cruiseferry
Tonnage:	37,799 GRT 3,420 metric tons deadweight (DWT)
Length:	177.10 m (581 ft 0 in)

corporate branding of onboard facilities, as well as updating her livery. In addition to this, all Club Cabins and Suites received new carpets and textiles as well as having their en-suites remodelled and refurbished.

The vessel currently (as of 2007) operates between Portsmouth and Bilbao, completing one return sailing every three days.
She has also been previously used to provide a weekly service between Portsmouth and Cherbourg - the "Party Cruise".

Beam:	28.40 m (93 ft 2 in)
Draught:	6.51 m (21 ft 4 in)
Decks:	11[3]
Installed power:	4 × Wärtsilä-SEMT Pielstick 12PC2-6V diesels combined 23,000 kW
Speed:	22 knots (40.74 km/h; 25.32 mph)
Capacity:	2500 passengers 2447 berths 580 cars 1115 lanemeters

Facilities

Bars:

- Silverstones Show Bar (3 bars) - Deck 7
- Felix Pub - Deck 7
- POSH Bar - Deck 8
- Sauna Bar - Deck 2
- Terrace Bar (outside) - Deck 8

Restaurants and Cafes:

- International Food Court - Deck 7
- Four Seasons Carvery and Buffet - Deck 7
- Langan's Brasserie - Deck 7
- Cafe Oliveto's - Deck 6

Shopping:

- Offshore Shopping - Deck 6

Lounges:

- Whale and Dolphin Watching Observatory - Deck 8
- Observation Lounge - Deck 8
- Peninsular and Oriental lounges (quiet areas) - Deck 8
- Arcade and Atrium areas - Decks 6, 7 and 8
- Massage chairs - Deck 7
- Commercial Driver's Lounge (freight drivers only) - Deck 8

Leisure:

- Steiner's Hairdressing Salon - Deck 6
- Steiner's Treatment Rooms - Deck 6
- Swimming pool - Deck 2
- Jacuzzi - Deck 2

- Children's splash pool - Deck 2
- 4x saunas - Deck 2
- Gym and workout room - Deck 2
- 2x cinemas - Deck 8
- Casino and fruit machine rooms - Deck 7
- Megadrome video games machine room - Deck 8
- Children's playrooms and Dolphin Club - Deck 6

Facilities:

- 24-hour Guest Services - Deck 6
- Bureau de Change - Deck 6
- 3x Satellite telephones - Deck 6

Cabins: ***(all en-suite)***

- Club Suites (sleeps 2)
- Large Club Cabins (sleeps 2)
- Family Club Cabins (sleeps 3 adults, or 2 adults 2 children)
- Club Cabins (sleeps 2)
- Outside 4 berth Cabins (sleeps 4)
- Outside 2 berth Cabins (sleeps 2)
- Inside 4 berth Cabins (sleeps 4)
- Inside 3 berth Cabins (sleeps 3)
- Inside 2 berth Cabins (sleeps 2)
- Inside 2 bunk Cabins (sleeps 2)

Wildlife research

Volunteers from the Biscay Dolphin Research Programme regularly use the facilities and bridge of the *Pride of Bilbao* for research into dolphins and many other rare cetacean species in the Bay of Biscay. The charity also organises watches and talks aboard the ferry for interested passengers.

Journal of Gerontology: SOCIAL SCIENCES
2006, Vol. 61B, No. 5, S232–S239

Snowbirds, Sunbirds, and Stayers: Seasonal Migration of Elderly Adults in Florida

Stanley K. Smith and Mark House

Bureau of Economic and Business Research, University of Florida, Gainesville.

Objectives. Most migration statistics in the United States focus on changes in place of usual residence, thereby missing temporary moves such as business trips, vacations, and seasonal migration. In this article, we analyze the temporary in- and out-migration of elderly adults in Florida. Our primary objectives are to develop a methodology for estimating the number of temporary migrants and to analyze their demographic characteristics.

Methods. Using survey data, we estimated the number, timing, and duration of temporary moves and the origins, destinations, and characteristics of elderly temporary migrants. We compared the characteristics of temporary in-migrants, out-migrants, and non-migrants, and we used logistic regression analysis in order to evaluate differences in those characteristics.

Results. We estimate that Florida had more than 800,000 elderly temporary in-migrants and more than 300,000 elderly temporary out-migrants at peak times in 2005. Income, education, employment, and health status were among the major determinants of temporary migration.

Discussion. The temporary migration of elderly adults has a major impact on the resident populations of both sending and receiving communities. This article presents a methodology for estimating temporary migration and provides insights into migratory patterns that cannot be achieved by focusing solely on changes in place of usual residence.

THERE have been many studies of the migration of elderly adults over the past several decades, covering issues such as the characteristics of migrants (e.g., Biggar, Longino, & Flynn, 1980), migration models (e.g., Wiseman, 1980), regional migration patterns (e.g., Longino, 1995), return migration (e.g., Stoller & Longino, 2001), and the economic impact of migration (e.g., Serow, 2003). In most studies, migration is defined as a change in one's place of usual residence. There are many moves, however, that do not lead to such changes; for example, short business trips, vacations, and seasonal shifts between warmer and cooler climates. We refer to moves that lead to changes in one's place of usual residence as *permanent migration* and moves that do not lead to such changes as *temporary migration*.

Florida is a major destination for elderly temporary migrants, but temporary migration of elderly adults is far from unique to Florida. Large seasonal inflows have been reported in Arizona (e.g., Happel & Hogan, 2002), Massachusetts (e.g., Cuba, 1989), Texas (e.g., Martin, Hoppe, Larson, & Leon, 1987), Spain (e.g., Gustafson, 2002), and Mexico (e.g., Truly, 2002). Large seasonal outflows have been reported in Arizona (e.g., McHugh, Hogan, & Happel, 1995), Minnesota (e.g., Hogan & Steinnes, 1996), and New York (e.g., Krout, 1983). Many other places undoubtedly have large numbers of elderly temporary migrants as well, but they go undocumented because of a lack of data. The numbers are likely to increase over the next few decades as incomes grow and the baby boom generation ages.

The impact of elderly temporary migrants on areas of origin and destination can be substantial (e.g., Happel & Hogan, 2002; Monahan & Greene, 1982; Rose & Kingma, 1989). Temporary migration affects traffic patterns, housing prices, retail sales, and the use of public transportation, medical services, recreational facilities, and a wide variety of other publicly and privately provided goods and services. Indeed, for many businesses and government agencies, effective budgeting, planning, and analysis cannot be accomplished without an accurate accounting for the number, timing, and duration of temporary moves.

Unfortunately, there are no data sources capable of providing complete, consistent coverage of temporary migration in the United States, for elderly adults or any other demographic group. This severely limits researchers' ability to analyze the determinants and consequences of temporary migration or even to determine the number and timing of temporary moves. Although investigators can cobble together estimates from a variety of administrative records, business statistics, and sample surveys, those data sources are often insufficient to provide complete, reliable estimates (e.g., Smith, 1989).

In this article, we describe several innovations that are designed to help researchers overcome these problems. Using survey data, we developed a methodology for constructing estimates of the number of elderly temporary migrants in Florida. We believe this methodology can be used to construct similar estimates in other places, helping businesses, service providers, and public officials plan for the impact of fluctuations in the size of the elderly population. Furthermore, the survey data we collected provide a basis for comparing the characteristics of elderly temporary in-migrants, out-migrants, and non-migrants and for analyzing determinants of the temporary migration patterns of elderly adults.

Florida has long been the leading destination for elderly permanent migrants in the United States (e.g., Longino, 1995; Longino & Bradley, 2003); there is reason to believe it is the leading destination for elderly temporary migrants as well (e.g., Rose & Kingma, 1989). Yet no previous study has attempted to

estimate the number and timing of both temporary in- and out-migrants in Florida or to analyze the characteristics of those migrants. We believe Florida provides an excellent testing ground for studying the temporary migration patterns of elderly adults and that—combined with findings from other studies—the lessons learned in Florida will enhance researchers' understanding of temporary migration more generally.

Methods

Many types of mobility could potentially be classified as temporary migration, ranging from the daily commute to work to short business trips, weekend getaways, 2-week vacations, and extended stays at a second residence (e.g., Smith, 1989; Zelinsky, 1971). All can be important for specific purposes, but our focus in this study is solely on extended stays. In order to remove the impact of short-term mobility, we restricted our analysis to moves that included a stay of 1 month or more. Although this restriction was somewhat arbitrary, it allowed us to differentiate between shorter and longer stays and was consistent with measures used in other studies (e.g., Happel & Hogan, 2002; Hogan & Steinnes, 1996, 1998). Researchers could explore other measures as well, of course.

Defining elderly adults as persons aged 55 or older, we used survey data to examine the characteristics of elderly non-Floridians who spent part of the year in Florida and elderly Floridians who spent part of the year elsewhere. The Bureau of Economic and Business Research at the University of Florida collected the data through telephone surveys. Most of the data came from a series of monthly household surveys in which the sample was selected using list-assisted random-digit dialing. A database maintained by the Marketing Systems Group/GENESYS (Ft. Washington, PA) identified working telephone banks with at least one residential number (a bank consists of the area code, prefix, and first digit of the suffix). Random numbers were added to the banks and those numbers were called. We limited the sample to households in Florida.

The database excluded banks that had not been assigned or that had been assigned exclusively to commercial or government entities. The database also excluded banks associated with cell phone numbers because cell phones represent individuals rather than households. Excluding cell phone numbers had little impact on the representativeness of the sample, because most households (including those with cell phone users) have a landline telephone. A recent survey found that cell-phone–only households accounted for less than 4% of all households in the United States in 2003; among persons aged 55 or older, less than 1% lived in a cell-phone–only household (Blumberg, Luke, & Cynamon, 2005).

The University of Florida telephone survey reached approximately 500 Florida households each month between September 2000 and December 2003. Interviewers identified the household member aged 18 or older who most recently had a birthday; this person was selected to be the respondent. Interviewers asked each respondent a series of questions regarding his or her demographic characteristics, residency status, and migration behavior. Most questions focused on the characteristics of the respondent (e.g., age, gender, race), but several dealt with the household as a whole (e.g., income, household size, number of visitors). In this study, we restricted our analysis to the 7,041 respondents aged 55 or older. Most of the results had a margin of error of less than 3%.

The surveys followed U.S. Census Bureau guidelines regarding residency status. Interviewers asked respondents if Florida was their usual place of residence (i.e., the place they lived and slept most of the time). Most respondents reported that it was, but 5.2% of the population aged 55 or older reported that Florida was not their usual place of residence. After we excluded visitors who had spent less than 1 month in Florida, the number of temporary residents decreased to 4.7% of survey respondents. Following traditional terminology, we call this group *snowbirds* (e.g., Happel & Hogan, 2002; Longino, 1995; McHugh & Mings, 1991).

Permanent residents of Florida may also be temporary migrants at one time or another. Interviewers asked Florida residents about their travel patterns during the previous year. More than 12% of the population aged 55 or older reported that they had spent more than 30 consecutive days at a location other than their usual place of residence. Following Hogan and Steinnes (1996), we call this group *sunbirds*. Finally, we call permanent residents of Florida who did not spend more than 30 consecutive days away from home *stayers*. This group accounted for 83% of all survey respondents aged 55 or older.

The household survey provided a representative sample of sunbirds and stayers but missed an unknown number of snowbirds staying with permanent residents or living in hotels, motels, and other types of lodging without direct outside telephone lines. We dealt with this problem in two ways. First, we used survey data on out-of-state visitors in order to develop an estimate of the number of snowbirds staying with permanent residents. Second, we conducted an additional survey of hotels and motels and developed an estimate of snowbirds staying in this type of lodging. By adding together the estimates from all three sources, we were able to construct a reasonably complete estimate of the total number of snowbirds in Florida.

We also analyzed the socioeconomic and demographic characteristics of elderly temporary migrants. We compared the characteristics of snowbirds and sunbirds with each other and with the characteristics of stayers, and we used logistic regression analysis in order to test for the statistical significance of differences in the characteristics of these three groups. We used the results of this analysis to draw inferences regarding determinants of temporary migration for elderly adults in Florida.

Results

How Many Snowbirds?

The number of elderly temporary residents included in the household surveys fluctuated considerably over the course of the year, peaking at 10%–12% of elderly survey respondents in January and February and declining to less than 1% during the summer (Table 1). This seasonal pattern was consistent with prior expectations and with findings reported elsewhere (e.g., Hogan & Steinnes, 1996; Krout, 1983; McHugh & Mings, 1991; Truly, 2002). By using these proportions and a 2005 estimate of almost 5.1 million permanent residents aged 55 or older, we estimated that there were approximately 698,000 snowbirds in Florida at the peak of the 2005 snowbird season but only 30,000 during the late summer.

These estimates did not cover all snowbirds, however. Although some elderly temporary residents reported that they were living with a permanent Florida resident, the surveys did not include most temporary residents aged 55 or older staying with permanent residents. In order to remedy this problem, we asked permanent residents (of all ages) if they had any out-of-state visitors during the previous month and, if so, how many and how long they had stayed. We used these data in order to develop an estimate of the number of temporary residents who were staying with permanent residents but were not included in the surveys.

More than 27% of Florida's permanent residents reported that they had out-of-state overnight visitors during the previous month (Smith & House, 2007). More than half stayed for less than 1 week, 38% stayed for 1–2 weeks, and 4% stayed for 2–4 weeks. Slightly more than 5% stayed for 1 month or more. The average number of visitors staying for 1 month or more was 2.4 per household.

There was not a strong seasonal trend in the proportion of permanent residents with visitors staying 1 month or more. The proportions averaged 1.6% for surveys conducted from January to March, 1.7% for surveys conducted from April to June, 1.4% for surveys conducted from July to September, and 1.2% for surveys conducted from October to December. By applying these proportions to the number of Florida households in 2005 and multiplying by the average number of visitors, we estimated that approximately 273,000 temporary residents were staying with permanent residents during the winter; 290,000 during the spring; 239,000 during the summer; and 205,000 during the fall.

Not all of these temporary residents were aged 55 or older, of course. We developed an estimate for that age group by using data collected from temporary residents staying with permanent residents. According to data collected by Smith and House (2007), of all temporary residents reached in the survey who were staying with permanent residents, approximately 30% were aged 55 or older. By applying this proportion to the estimates described in the preceding paragraph, we estimated that there were 82,000 temporary residents aged 55 or older staying with permanent residents during the winter; 87,000 during the spring; 72,000 during the summer; and 61,000 during the fall.

The household survey did not reach temporary residents who were staying in hotels, motels, and other types of lodging without direct outside telephone lines (we should note that many temporary residents staying in mobile home and RV parks had direct outside telephone lines and were captured by the household survey). In order to develop an estimate of temporary residents staying in hotels and motels, we conducted a statewide survey of 267 hotels and motels in Florida. This survey asked hotel and motel managers how many rooms they had, how many rooms were occupied by guests staying for at least 30 consecutive nights, how many guests were staying in those rooms, and how many of those guests were aged 55 or older (Smith & House, 2007).

We conducted the survey in June 2005 and July 2005. The survey collected data on guests who were staying at the hotel or motel in June and July as well as on individuals who were guests during January 2005 and February 2005. Approximately 90% of the managers were able to provide information for June and July, and 77% were able to provide information for January and February.

Table 1. Survey Respondents by Residency Status and Month

	Permanent		Temporary		
Month	*n*	%	*n*	%	Total
Jan	522	87.9	72	12.1	594
Feb	548	90.1	60	9.9	608
Mar	477	92.1	41	7.9	518
Apr	492	92.3	41	7.7	533
May	500	98.4	8	1.6	508
Jun	507	99.2	4	0.8	511
Jul	495	99.2	4	0.8	499
Aug	499	99.4	3	0.6	502
Sep	653	99.5	3	0.5	656
Oct	620	98.4	10	1.6	630
Nov	644	95.4	31	4.6	675
Dec	719	93.5	50	6.5	769
Total	6,676	95.3	327	4.7	7,003

We weighted survey results according to the statewide distribution of hotels and motels by number of rooms. According to the survey, 52% of hotels and motels had guests staying at least 30 consecutive nights in January and February, compared with 36% in June and July. The average number of such guests was 31 per hotel or motel in January and February and 39 in June and July. By applying these results to a count of hotels and motels in Florida, we estimated that there were approximately 75,000 temporary residents staying in hotels and motels in January and February and 66,000 in June and July.

According to the managers, 51% of these guests in January and February were aged 55 or older; in June and July, the comparable figure was 26%. By applying these proportions to the estimates described in the preceding paragraph, we estimated that there were approximately 38,000 snowbirds staying in hotels and motels in January and February and 17,000 in June and July. Although hotels and motels accommodate millions of tourists and business travelers to Florida each year, they clearly do not provide lodging for many snowbirds as defined in this study.

By summing these three estimates, we estimated that there were 818,000 snowbirds in Florida at the peak of the 2005 winter season and 119,000 during the late summer. Few comparable estimates are available, but it is likely that Florida has more (perhaps far more) snowbirds than any other state. Previous studies have reported 300,000 snowbirds in Texas (Martin et al., 1987) and 273,000 in Arizona (Happel & Hogan, 2002) at the peaks of their seasons.

We should note that estimates of snowbirds staying with permanent residents or living in hotels and motels are less reliable than estimates of snowbirds staying in their own accommodations because the former rely more heavily on indirect estimation techniques and are more likely to be affected by respondent error (especially for the hotel/motel survey). However, those two groups accounted for a relatively small proportion of Florida's snowbirds during the peak season, and it is unlikely that errors in those estimates had a large impact on the overall snowbird estimate.

We should also note that the estimates do not include snowbirds staying in campgrounds, bed and breakfasts, and other types of lodging without direct outside telephone lines. Given the relatively small number of snowbirds that were staying in hotels and motels, however, we doubt that many were staying

Table 2. Demographic Characteristics of Snowbirds, Sunbirds, and Stayers

Characteristic	Snowbirds	Sunbirds	Stayers
Mean age, years	69.7 (327)	69.1 (808)	68.1 (5,826)
Aged 65 or older, %	72.2 (327)	69.8 (808)	59.5 (5,826)
Male, %	54.1 (327)	48.4 (808)	44.7 (5,826)
Married, %	75.8 (322)	59.4 (799)	56.2 (5,777)
White, %	94.0 (319)	92.7 (795)	88.8 (5,750)
Black, %	0.9 (319)	1.9 (795)	5.3 (5,750)
Hispanic, %	0.3 (322)	4.3 (800)	7.8 (5,826)
Mean education, years	14.5 (327)	14.7 (808)	14.0 (5,826)
Mean income, $	62,374 (238)	58,998 (647)	45,212 (4,622)
Employed, %	9.4 (320)	16.9 (804)	28.8 (5,806)
Excellent/good health, %	63.2 (321)	55.2 (803)	49.1 (5,783)
Fair/poor health, %	12.2 (321)	16.7 (803)	21.8 (5,783)

Note: Sample size (n) in parentheses.

in these other types of lodging. We do not believe this omission had much of an impact on the overall snowbird estimate.

How Many Sunbirds?

More than 12% of Florida's permanent residents aged 55 or older reported that they had spent more than 30 consecutive days somewhere other than their place of usual residence during the previous year. Given the size of Florida's elderly population in 2005, these data imply that approximately 617,000 sunbirds left home for at least 1 month during the year. About 92% left the state, and 8% went to some other location in Florida. As we show later, sunbirds were substantially more likely to be away from home during the summer than during the winter. By applying these proportions to the total number of sunbirds, we estimated that approximately 313,000 individuals left the state in July and 62,000 in January.

How do the out-migration rates of elderly adults in Florida compare with those found elsewhere? Only a few studies have considered temporary migration from the perspective of the sending (rather than receiving) region. For those that have, results were similar to those reported here. Krout (1983) reported that 13% of the population aged 60 or older in a New York county left the state for at least 2 months of the year. Hogan and Steinnes (1998) reported that 10% of Arizona's population aged 60 or older left the state for at least 4 consecutive weeks, and 9% of Minnesota's population aged 60 or older left for at least 5 consecutive weeks. It is noteworthy that all the estimates fall within a range of 9%–13%.

Comparing Snowbirds, Sunbirds, and Stayers

How do the characteristics of snowbirds and sunbirds compare to each other and to the characteristics of stayers? As shown in Table 2, there were substantial differences in age and gender. Snowbirds were older than sunbirds, and both groups were older than stayers; differences were considerably greater for the proportion aged 65 or older than for that of the mean age. Men accounted for 54% of snowbirds, 48% of sunbirds, and 45% of stayers. The proportion male for stayers was similar to the proportion among the U.S. population aged 55 or older (44% in 2000), suggesting that men are positively selected among temporary migrants, especially for snowbirds.

There were substantial differences in the marital status of the three groups. Three fourths of all snowbirds were married, compared with 59% of sunbirds and 56% of stayers. It appears that married couples were strongly positively selected among snowbirds but only weakly positively selected among sunbirds. Other researchers have noted a high proportion married among elderly temporary migrants (e.g., Hogan & Steinnes, 1996, 1998; Krout, 1983; Martin et al., 1987; McHugh & Mings, 1991).

Snowbirds were overwhelmingly White (94%) and non-Hispanic (more than 99%). Sunbirds had almost as high a proportion White (93%), but 4% were Hispanic. Only 89% of stayers were White, and almost 8% were Hispanic. Again, other researchers have noted the positive selection of Whites among elderly temporary migrants (e.g., McHugh, 1990; McHugh & Mings, 1991).

Snowbirds had a mean education of 14.5 years and a mean annual income of $62,374; only 9% were employed. Sunbirds had a slightly higher educational level (14.7 years) and a considerably higher proportion employed (17%) but a lower mean income ($58,998). Stayers were somewhat less educated (14.0 years) than the other two groups and had a substantially lower mean income ($45,212) in spite of having a higher proportion employed (29%). Numerous studies have reported higher incomes and educational levels and lower employment rates for elderly temporary migrants than for elderly nonmigrants (e.g., Hogan & Steinnes, 1996, 1998; Krout, 1983; McHugh & Mings, 1991; Monahan & Greene, 1982; Sullivan, 1985).

Snowbirds enjoyed better health than sunbirds, and both groups were healthier than stayers. More than 63% of snowbirds rated their health as very good or excellent, compared with 55% of sunbirds and 49% of stayers. Conversely, only 12% of snowbirds rated their health as fair or poor, compared with 17% of sunbirds and 22% of stayers. Several previous studies have found elderly temporary migrants to be healthier than the elderly population as a whole (e.g., Monahan & Greene, 1982; Sullivan, 1985).

As Table 2 shows, snowbirds and sunbirds tended to be more similar to each other than to stayers. Focusing solely on these two types of temporary migrants, we found that snowbirds tended to be away from home for longer periods of time than sunbirds. More than 72% of snowbirds spent more than 3 months at their secondary place of residence, compared with only 30% of sunbirds (data not shown here).

Not surprisingly, snowbirds flocked to Florida during the winter months (Table 3). More than 80% of all snowbirds reported being in Florida during January, February, and March, compared with less than 6% during June, July, August, and September. Conversely, sunbirds generally traveled during the summer. More than half of sunbirds visited their secondary residences in June and July, compared with only 10%–13% from November through April. Clearly, both migration flows are highly seasonal in nature and both groups can be classified as seasonal migrants as well as temporary migrants.

The places of origin for snowbirds were similar—but not identical—to the places of destination for sunbirds (Table 4). Almost 78% of snowbirds came from the Northeast or Midwest, but only 55% of sunbirds had secondary residences in those regions. Slightly more than 9% of snowbirds came from other southern states, but 18% of sunbirds traveled to those states, and another 8% remained in Florida.

Table 3. Number of Snowbirds and Sunbirds Residing at Secondary Residence, by Month

	Snowbirds		Sunbirds	
Month	*n*	%	*n*	%
Jan	253	81.9	41	10.9
Feb	259	83.8	45	12.0
Mar	252	81.6	41	10.9
Apr	194	62.8	49	13.0
May	68	22.0	94	25.0
Jun	17	5.5	164	43.6
Jul	17	5.5	207	55.1
Aug	17	5.5	203	54.0
Sep	18	5.8	139	37.0
Oct	68	22.0	79	21.0
Nov	148	47.9	49	13.0
Dec	174	56.3	50	13.3
Total	309	—	376	—

Approximately 10% of both snowbirds and sunbirds had origins or destinations in foreign countries. More than four of five international snowbirds came from Canada, but only one of five international sunbirds went to Canada. The most likely explanation for this difference is that Canadian citizens lose their national health insurance benefits if they do not meet minimum residency requirements (Health Canada, 2006); consequently, they tend to be temporary rather than permanent migrants to Florida.

Almost 83% of snowbirds came to Florida because of its warm winters; all other reasons were of minor importance (Table 5). This is a common finding in studies of seasonal migration to sunbelt states (e.g., Hogan, 1987; Krout, 1983; Martin et al., 1987). In contrast, less than 10% of sunbirds left their homes primarily for weather-related reasons. More than half traveled to visit family and friends, and 16% traveled for recreational purposes. Escaping the state's hot summers may have played a secondary role in the travel patterns of elderly Floridians, but it did not play the primary role.

Snowbirds had a longer history of traveling to a secondary residence than did sunbirds (Table 6). Only 12% of snowbirds had been coming to Florida for fewer than 5 years, and 33% had been coming for 15 years or more. In contrast, 41% of sunbirds had been going to their secondary residences for fewer than 5 years and only 23% for 15 years or more. This was most likely due to the fact that many sunbirds were recent migrants to the state.

Almost 92% of snowbirds and 94% of sunbirds owned homes at their usual place of residence, compared with 87% of stayers (Table 7). However, whereas 82% of snowbirds owned homes at their secondary places of residence in Florida, only 63% of sunbirds owned homes at their secondary places of residence. The lower rate of secondary home ownership for sunbirds is consistent with their shorter length of stay at their secondary residences.

Spending winters in Florida appears to be a precursor to a permanent move for many snowbirds. Of all persons aged 55 or older who moved permanently to Florida between 2000 and 2003, 23% reported that they had lived part of the year in the state prior to moving permanently. Furthermore, 30% of snowbirds reported that it was likely or very likely that they would move to the state permanently at some time in the future.

Spending summers elsewhere is not as likely to be a precursor to a permanent move for sunbirds; only one in six reported that it was likely that they would move permanently to their secondary place of residence. However, we should note that many sunbirds had already made such a move: 56% reported that their secondary residence had once been their usual place of residence. Sunbird migration thus reflects the well-known pattern of return migration (e.g., DaVanzo & Morrison, 1981; Serow & Charity, 1988; Stoller & Longino, 2001) but is carried out seasonally rather than through a change in permanent residence.

We based the characteristics of snowbirds described above solely on persons who responded to the household surveys. Although some of those respondents were staying with permanent residents, we did not have information on the characteristics of all snowbirds staying with permanent residents or living in hotels or motels. However, we did have information on the snowbirds staying with permanent residents that were reached by the monthly surveys. We compared the characteristics of that group with the characteristics of snowbirds staying in their own accommodations and drew inferences

Table 4. Region of Primary Residence for Snowbirds and Secondary Residence for Sunbirds

	Snowbirds		Sunbirds	
Region	*n*	%	*n*	%
Northeast	124	38.8	268	35.4
Midwest	124	38.8	151	19.9
South (not Florida)	30	9.4	135	17.8
Florida	—	—	58	7.7
West	10	3.1	66	8.7
Canada	27	8.4	17	2.2
Other foreign	5	1.6	63	8.3
Total	320	100.0	758	100.0

Table 5. Primary Reason for Visiting Secondary Residence

	Snowbirds		Sunbirds	
Reason	*n*	%	*n*	%
Weather/climate	271	82.9	38	9.5
Health	11	3.4	15	3.7
Job/business	6	1.8	24	6.0
Visit family or friends	10	3.1	207	51.6
Recreation/vacation	16	4.9	64	16.0
College/military	0	0.0	1	0.2
Other	13	4.0	52	12.9
Total	327	100.0	401	100.0

Table 6. Number of Consecutive Years Traveling to Place of Secondary Residence

	Snowbirds		Sunbirds	
Number of Years	*n*	%	*n*	%
<5	34	11.8	149	40.6
5–9	73	25.4	66	18.0
10–14	86	30.0	66	18.0
15–19	43	15.0	29	7.9
20–24	22	7.7	24	6.5
25+	29	10.1	33	9.0
Total	287	100.0	367	100.0

Table 7. Ownership of Primary and Secondary Residence

	Snowbirds		Sunbirds		Stayers	
Ownership	*n*	%	*n*	%	*n*	%
Primary residence						
Yes	299	91.7	754	93.9	5,015	86.7
No	27	8.3	49	6.1	770	13.3
Total	326	100.0	803	100.0	5,785	100.0
Secondary residence						
Yes	267	81.7	253	63.1	—	—
No	60	18.3	148	36.9	—	—
Total	327	100.0	401	100.0	—	—

based on that comparison. Table 8 shows the characteristics of these two groups.

The two groups differed on some characteristics but not on others. Snowbirds who stayed with permanent residents were older than those who stayed in their own accommodations and had a lower proportion male, a lower proportion White, and a higher proportion employed. Their income was considerably lower, but their educational level, proportion married, and health status were about the same. Although the sample size was small, we believe the characteristics shown in the second column of Table 8 provide a reasonable proxy for the characteristics of all snowbirds who stayed with permanent residents. Given the relatively small proportion of snowbirds who stayed with permanent residents and the generally similar characteristics of these two types of snowbirds, we believe the characteristics of snowbirds in our sample provide a reasonable proxy for the characteristics of all snowbirds in Florida.

Determinants of Temporary Migration

Why do some elderly adults become temporary migrants but others do not? In order to answer this question, we developed a set of hypotheses based on theoretical considerations and the results of other studies, and tested them using logistic regression analysis. Specifically, we hypothesized that the following variables would influence temporary migration:

1) Income, measured using the midpoints of 10 income categories. We expected income to have a positive effect because higher incomes provide the financial resources needed to travel and to maintain a residence in more than one location.
2) Education, measured as years of school completed. We expected education to have a positive effect because higher educational levels raise one's knowledge of alternative locations and perhaps one's preferences for travel. Education may also pick up differences in wealth missed by the income variable.
3) Marital status, coded 1 if married and 0 otherwise. We expected marriage to have a positive effect because social activities associated with temporary migration are often oriented toward married couples (Hogan & Steinnes, 1998).
4) Health status, measured on a Likert scale with 1 being excellent and 5 being very poor. We expected health to have a negative effect because poor health impedes the physical ability to travel and may reduce wealth through high medical expenditures.
5) Employment, coded 1 if employed and 0 otherwise. We expected employment to have a negative effect because temporary migration and employment are often competing uses of time.

Table 8. Selected Characteristics of Snowbirds Staying/Not Staying With Permanent Residents

Characteristic	Staying With Permanent Residents	Not Staying With Permanent Residents
Mean age, years	73.6 (21)	69.5 (304)
Mean education, years	14.5 (21)	14.5 (304)
Mean income, $	52,941 (17)	63,100 (221)
Male, %	47.6 (21)	54.6 (304)
Married, %	76.2 (21)	76.0 (300)
White, %	90.5 (21)	93.0 (300)
Black, %	0.0 (21)	1.0 (300)
Hispanic, %	0.0 (21)	0.3 (300)
Employed, %	14.3 (21)	8.7 (300)
Excellent/good health, %	61.9 (21)	63.0 (300)

Note: Sample size (*n*) in parentheses.

We expected these five variables to affect both temporary in-migration (snowbirds) and temporary out-migration (sunbirds). For temporary out-migration only, we included two other explanatory variables:

6) Nativity, coded 1 if born in Florida and 0 otherwise. We expected nativity to have a negative effect because Florida natives are less likely to have personal ties to people and places outside the state than is true for people born elsewhere.
7) Duration of residence, measured as the number of years since last moving to Florida (measured as age for persons who had always lived in Florida). We expected duration of residence to have a negative effect because a longer time lived in Florida weakens personal ties to people and places outside the state.

We also investigated the effects of age (measured in years), gender (1 for men, 0 otherwise), race (1 for White, 0 otherwise), and Hispanic origin (1 for Hispanic, 0 otherwise). Although temporary migration rates may differ substantially within these demographic groups, we believe those differences are caused primarily by differences in income, education, marital status, health status, and employment rather than by differences in the demographic variables themselves. Consequently, we expected age, gender, race, and Hispanic origin to have no significant effects in a multivariate analysis.

We tested these hypotheses by using three logistic regression models (see DeMaris, 2004, for a discussion of binary dependent variables and the use of logistic regression models). For Model 1, the data set consisted of all permanent residents aged 55 or older; we coded the dependent variable 1 for sunbirds and 0 for stayers. Because we classified all permanent residents aged 55 or older as either sunbirds or stayers, the regression coefficients for Model 1 show the impact of the explanatory variables on the probability that an elderly Floridian would become a temporary out-migrant.

For Model 2, the data set consisted of snowbirds and stayers; we coded the dependent variable 1 for snowbirds and 0 for stayers. Because we did not draw snowbirds and stayers from the same population (i.e., permanent residents of Florida), this was not a probability model. Rather, it showed how the characteristics of snowbirds differ from those of stayers. Because we included stayers in both Models 1 and 2, a comparison of the

regression coefficients from these two models allows us to draw inferences regarding differences and similarities in the characteristics of snowbirds and sunbirds. Given the similarities shown in previous tables, we believed most of the results for Model 2 would be similar to those for Model 1.

We also tested a model directly comparing snowbirds and sunbirds. In Model 3, the data set consisted of all temporary migrants; we coded the dependent variable 1 for snowbirds and 0 for sunbirds. This model included one additional explanatory variable: months spent at place of temporary residence. Again, this was not a probability model. It was simply a statistical procedure for comparing the characteristics of snowbirds and sunbirds; the regression coefficients would be statistically significant only for characteristics on which the two groups differed significantly.

Table 9 shows the results. For Model 1, we found that income and education had significant positive effects on the probability of being a temporary out-migrant, whereas employment, health status, and duration of residence had significant negative effects. All of these results were consistent with our expectations. Nativity had the expected sign but marital status did not; neither of these effects was significant. None of the other effects were statistically significant, supporting our hypothesis that differences in age, gender, race, and Hispanic origin have little impact on the probability of being a temporary out-migrant, once the effects of the other explanatory variables have been accounted for.

The results for Model 2 were similar, but not identical, to those for Model 1. Income, employment, health status, and education had the expected effects, but only the first three were significant. We again found the effects of age, gender, and race to be insignificant. The major differences between the two models were for marital status and Hispanic origin, which had significant effects for snowbirds (Model 2) but not for sunbirds (Model 1).

Most of the regression coefficients in Model 3 were statistically insignificant, reflecting the similarities between snowbirds and sunbirds. However, we did find that snowbirds were significantly more likely than sunbirds to be married and to spend more time at their temporary residence, whereas sunbirds were significantly more likely than snowbirds to be employed and to be Hispanic. These results were consistent with those reported earlier in the article.

Table 9. Results From Logistic Regression Models

Variable	Model 1	Model 2	Model 3
Intercept	−3.605***	−3.635***	−0.092
Income	0.053***	0.065***	0.005
Education	0.085***	0.017	−0.004
Married	−0.074	0.514***	0.577**
Employed	−0.824***	−1.476***	−0.633*
Health	−0.092*	−0.220***	−0.153
Florida native	−0.466	—	—
Duration	−0.011***	—	—
Months	—	—	0.256***
Age	0.010	0.006	0.003
Gender	0.047	0.220	0.211
Race	0.229	0.273	0.158
Hispanic	−0.203	−2.771**	−2.619**
Model chi square	173.501***	176.923***	84.095***
N	5,224	4,848	583

Note: Model 1 = sunbird (1) vs stayer (0); Model 2 = snowbird (1) vs stayer (0); Model 3 = sunbird (1) vs snowbird (0).

*$p < .05$; **$p < .01$; ***$p < .001$.

Discussion

We estimate that some 818,000 snowbirds were in Florida at the peak of the 2005 winter season, and 119,000 were there during the summer. Approximately 62,000 sunbirds left the state during the winter, and 313,000 left during the summer. Given Florida's estimated permanent population of 5.1 million persons aged 55 or older in 2005, these numbers imply that more than 5.8 million elderly adults resided in the state during the winter and fewer than 4.9 million did so during the late summer, a swing of almost 20% from the low season to the high. The swing is substantially greater for many local areas because the geographic distribution of elderly temporary migrants is very uneven throughout the state. These swings have a tremendous impact on traffic congestion, water consumption, occupancy rates, retail sales, and many other aspects of life in the affected communities. Clearly, there are many circumstances in which effective planning and analysis require some accounting for seasonal migration of elderly adults.

Both snowbirds and sunbirds tended to be non-Hispanic Whites with relatively high incomes and educational levels. They enjoyed better health, had higher proportions married, and were less likely to be employed than stayers. Their moves were highly seasonal (especially for snowbirds), as they typically spent winters in Florida and summers elsewhere. These characteristics are consistent with those found in most studies of temporary migration patterns of elderly adults (e.g., Hogan & Steinnes, 1996, 1998; Krout, 1983; McHugh, 1990; Monahan & Greene, 1982; Sullivan, 1985). In fact, except for seasonality, they are consistent with most studies of elderly permanent migration as well (e.g., Biggar et al., 1980; Longino, 1995; Speare & Meyer, 1988).

We believe that snowbirds and sunbirds are reflections of the same basic phenomenon; namely, the tendency for a significant number of elderly adults to spend part of the year in one location and part in another. We found that many sunbirds were former snowbirds who had spent part of the year in Florida before moving to the state permanently. Many snowbirds will eventually become sunbirds, moving to the state permanently but spending several months each year at their previous place of residence. These two groups share the same seasonal migratory patterns and many of the same demographic characteristics. As noted by Hogan and Steinnes (1996), snowbirds and sunbirds can be viewed as two species of the same genus.

They are not identical, however. Although the differences were not always large or statistically significant, snowbirds generally had higher incomes, higher proportions married, lower proportions employed, better health, and longer stays at their temporary residences than sunbirds. Further research is needed before analysts can fully understand the similarities and differences between snowbirds and sunbirds and why some elderly adults become temporary migrants whereas others become permanent migrants or do not migrate at all.

There has been considerable discussion as to whether temporary migration is a precursor to, or a substitute for, permanent migration (e.g., Hogan & Steinnes, 1996; McHugh, 1990; Sullivan, 1985). Some people spend substantial amounts

of time in an area before moving there permanently, whereas others visit frequently over a period of years but never make a permanent move. We found that almost one in four elderly adults who moved to Florida between 2000 and 2003 had previously lived in the state on a temporary basis; for them, temporary migration was a precursor to a permanent move. However, two thirds of the snowbirds in the sample reported that it was unlikely they would ever move to the state permanently; for them, temporary migration was a substitute for permanent migration. Although it can play either role, temporary migration in Florida appears to be a substitute for permanent migration more frequently than a precursor.

More than half of the sunbirds leaving Florida were returning to a place they had lived previously. Numerous studies of permanent migration have noted such counter flows (e.g., Longino, 1995), but studies of temporary migration have generally overlooked these patterns. Clearly, ties with family and friends are not completely severed when people change their place of permanent residence. An attractive feature of temporary migration is that it allows people to enjoy many of the benefits of a new location without giving up all of the benefits of a previous location.

Migration status at the beginning of the 21st century is too complex to be measured using a simple dichotomy (i.e., moved or did not move). One can observe many types of migration behavior, including one-time-only changes in permanent residence, multiple changes in permanent residence, semi-annual seasonal moves with no change in permanent residence, and frequent temporary moves without the establishment of a permanent residence (e.g., Bell & Ward, 2000; Jobes, 1984; Zelinsky, 1971). Simply classifying people as migrants or nonmigrants does not capture these differences or reflect the diversity found within the broad migration experience.

In this article, we described a methodology for developing estimates of the number, timing, and characteristics of elderly temporary in- and out-migrants in Florida. Although it produces reasonable estimates and can be used anywhere, this methodology is expensive and time-consuming and cannot provide data for small areas unless it is carried out on a massive scale. Given the importance of information on temporary migration for many types of decision making, we believe the lack of relevant data is a major shortcoming of the U.S. statistical system.

We hope the coming years will see efforts directed toward the development of a richer classification system and the collection of more comprehensive migration data. The American Community Survey or some other large-scale survey would seem to be a good place to start. Without some consideration of temporary migration, researchers will never achieve a full understanding of the migratory patterns of elderly adults (or any other group). The large number of temporary migrants and their impact on both sending and receiving communities underscore the importance of such an undertaking.

ACKNOWLEDGMENTS

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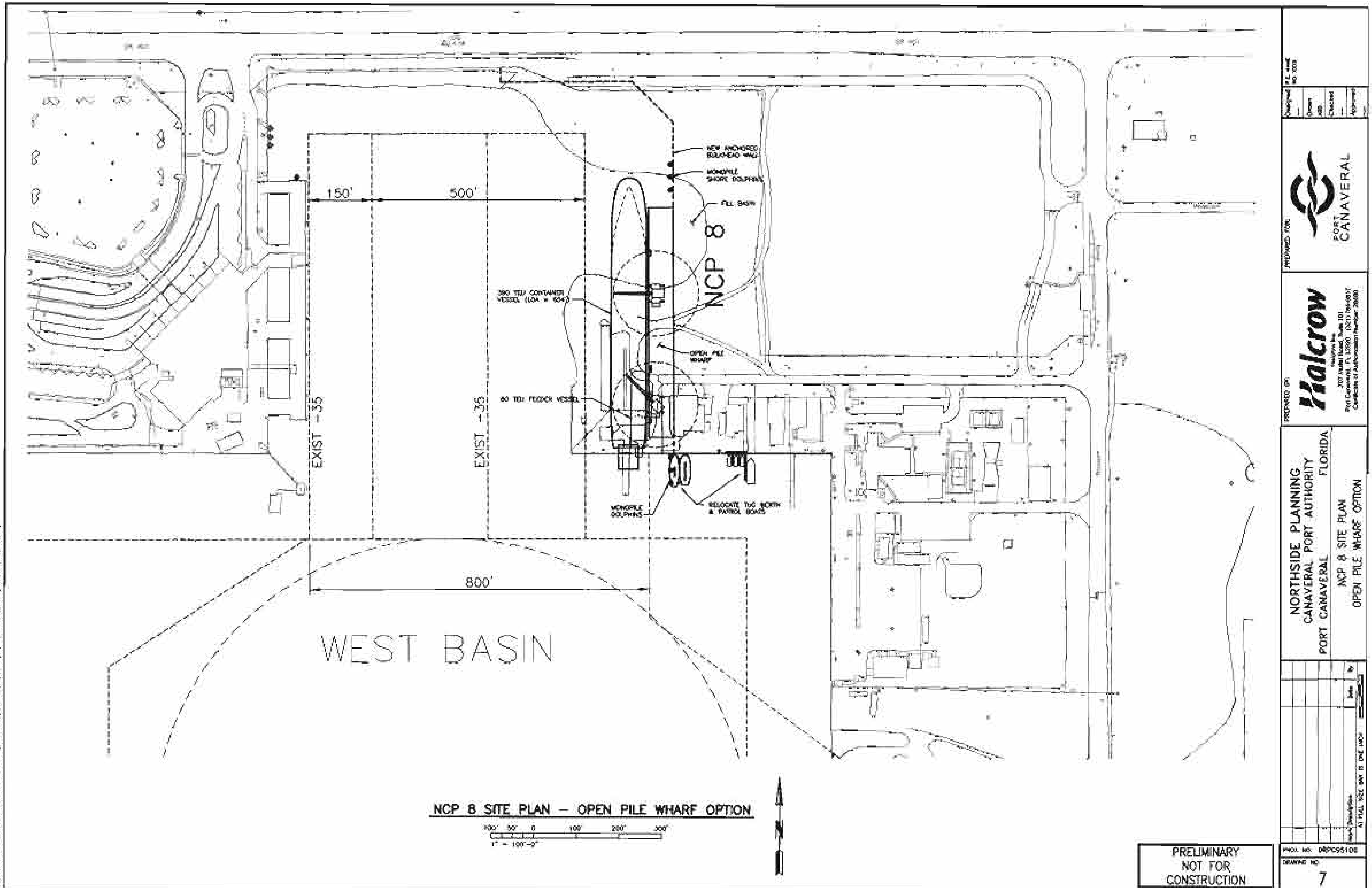
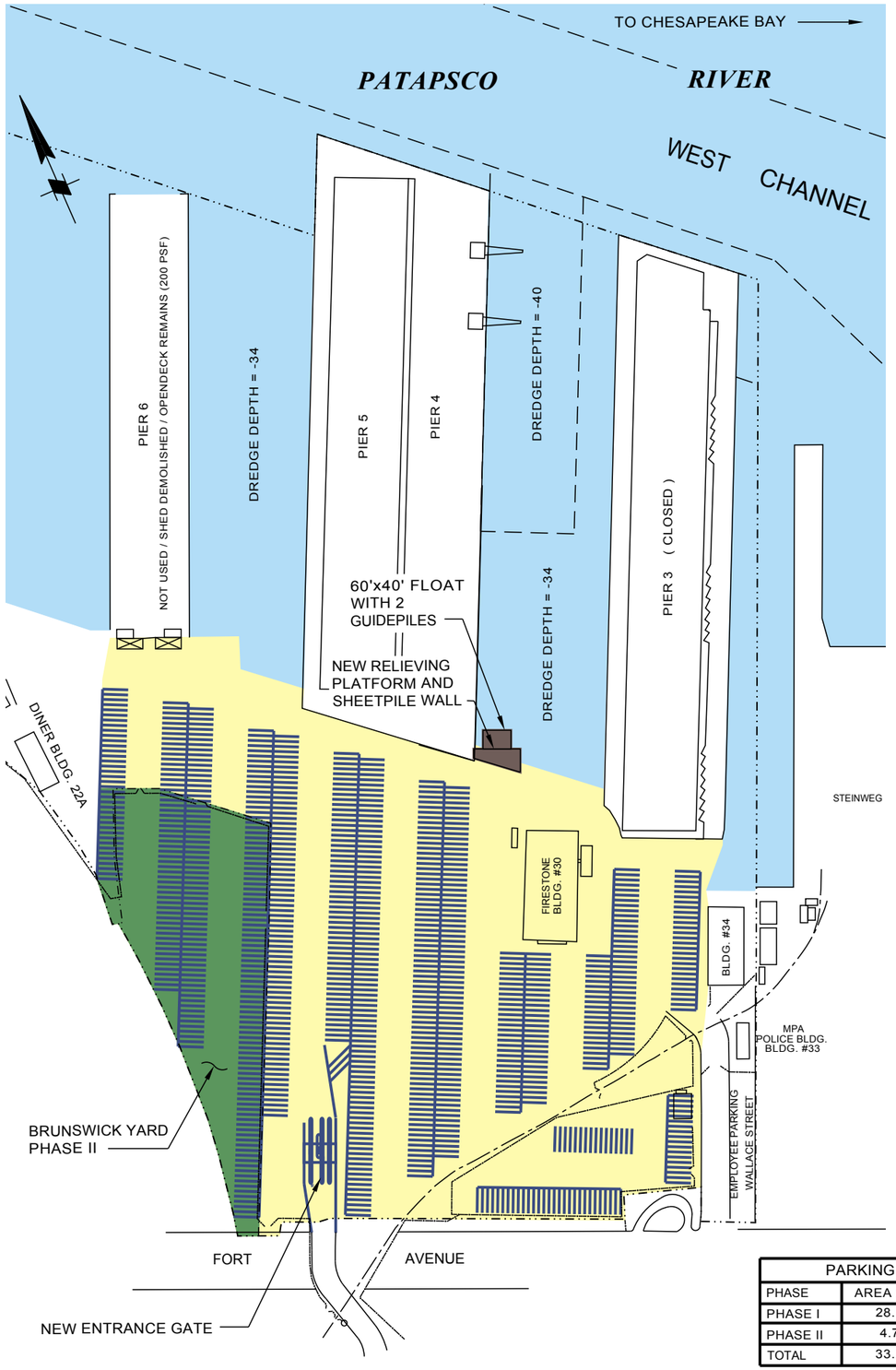
Decision Editor: Charles F. Longino, Jr., PhD

Appendix F
Layouts of the Project Components

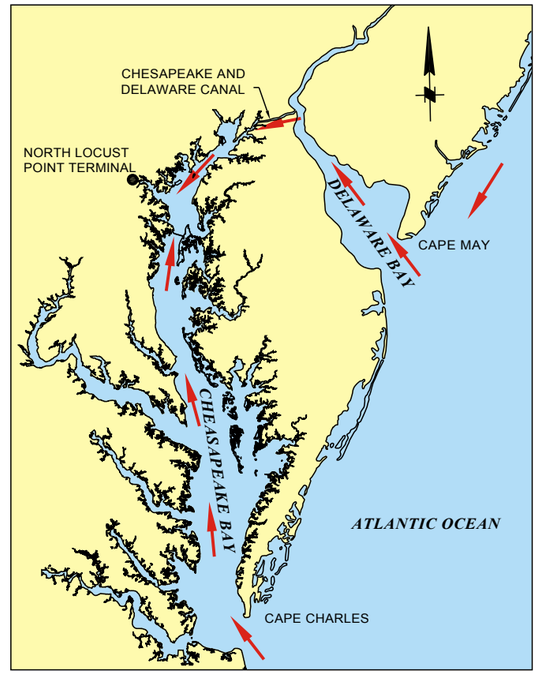

150'
500'
EXIST -35
EXIST -35
800'
WEST BASIN
NCP 8
NEW ANCHORED BULKHEAD WALL
MONOPILE SHORE DOLPHINS
FILL BASIN
390 TEU CONTAINER VESSEL
OPEN PILE WHARF
80 TEU FEEDER VESSEL
MONOPILE DOLPHINS
RELOCATE TUG BERTH & PATROL BOATS
NCP 8 SITE PLAN – OPEN PILE WHARF OPTION
1" = 100'-0"
PRELIMINARY
NOT FOR
CONSTRUCTION
PREPARED FOR
PORT CANAVERAL
PREPARED BY
Halcrow
NORTHSIDE PLANNING
CANAVERAL PORT AUTHORITY
PORT CANAVERAL FLORIDA
NCP 8 SITE PLAN
OPEN PILE WHARF OPTION
DRAWING NO.
7



NORTH LOCUST POINT TERMINAL PLAN

SCALE: 1" = 300'

PARKING CAPACITIES		
PHASE	AREA (AC)	NO. OF SPACES
PHASE I	28.5	639
PHASE II	4.7	190
TOTAL	33.2	829



NAVIGATIONAL ACCESS PLAN

SCALE: NONE

ENGINEER'S CONSTRUCTION COST ESTIMATE

DATE PREPARED: 11-Jun-10

CLIENT: Maryland Environmental Service

CONSTRUCTION CONTRACT NO.:

ESTIMATED BY: Moffatt and Nichol

PROJECT TITLE: NLP DOMESTIC BARGE TERMINAL PHASE 1

STATUS OF DESIGN: Concept Estimate

Item	Description	Quantity	Units	Unit Cost	Total
1001	Mobilization and Demobilization (10%)	1	LS	$438,224	$440,000
1002	Building Demolition - Building #32 and Concrete Slab	3,200	SF	$10	$32,000
1003	Site Grading and Preparation	1.15	AC	$5,000	$5,739
5001	Paving	8,500	SY	$29	$246,500
5002	Entrance Gate	1	LS	$950,000	$950,000
6001	Relieving Platform	3,500	SF	$200	$700,000
6002	Float with 2 Guide Piles	2,400	SF	$100	$240,000
6003	Sheetpile wall	100	LF	$2,000	$200,000
6004	Portable Loading Ramp	1	EA	$2,000,000	$2,000,000
7001	Erosion and Sediment Control	1	LS	$40,000	$40,000
	TOTAL				**$4,854,239**
				25% CONTINGENCY	$1,213,560
	CONTRACT TOTAL				**$6,067,799**
	Stormwater Management Mitigation - Onsite	1.76	Treated Ac.	$60,000.00	$105,372
	Engineering, Administration and Permitting	1	LS	$606,779.90	$610,000
	TOTAL COST				**$6,783,171**

150' 0' 150' 300'

SCALE: 1"=300'

P:\6056-02 - 2020 STRAT PLAN\NLP JUNE 2010 STUDY\NLP_EXST_COND; ---; Metz, Dan

2020 FACILITY DEVELOPMENT PLAN

AMERICA'S MARINE HIGHWAY
I-95 CORRIDOR BALTIMORE TERMINAL

MOFFATT & NICHOL

DATE: JUNE 2010
SCALE: 1"=300'

FIGURE NO.

SOUTH TERMINAL

Scale: 1"=250'

0 125 250 375 FEET

Appendix G
Detailed Capital Expenditure Information for the Project Components

Halcrow

707 Mullet Road
Suite 101
Cape Canaveral
FL, 32920

ESTIMATE

NCP 8 GENERAL BERTH

Sheet 1 of 1
Job No. HC-09-05
Date 8/12/2009
By G. Ledford

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXT. COST
	General Berth Cost				
1	Mobilization - Demobilization		LS		$ 400,000
2	Fill Fishing Fleet Basin using ICCO material	19000	CY	$3	$ 57,000
3	Shallow main bulkhead wall at wharf	610	LF	$2,500	$ 1,525,000
4	Submerged toewall top at -15'	880	LF	$3,000	$ 2,640,000
5	Open pile wharf, 60' X 540'	34200	SF	$200	$ 6,840,000
6	Fabriform rip-rap at bow and sterns areas	24000	SF	$30	$ 720,000
7	Dredging to -13 feet, near shore berm disposal	127000	CY	$15	$ 1,905,000
8	Dredging to -35 feet, offshore disposal	372000	CY	$10	$ 3,720,000
9	Remove Tug Pier and upland structures	1	LS	$250,000	$ 250,000
10	Remove Anchored SSP Wall	450	LF	$400	$ 180,000
11	North anchored bulkhead wall & south return wall	680	LF	$5,000	$ 3,400,000
12	Shore mooring dolphins	6	EA	$150,000	$ 900,000
13	Berth Utilities		LS		$ 300,000
	subtotal				$22,837,000
	Contingency	10	%		$2,283,700
					$25,120,700
	Engineering, Permits	10	%		$2,512,070
	Total Berth Cost				**$25,120,700**

DRAFT
Updated South Terminal Marine Infrastructure Park
Engineer's Estimate of Costs
(Version 2 - 5/3/2010)

Upland Area Development Cost Estimate

Item Description	Quantity	Units	Unit Cost	Item Cost
Land Acquisition	11	AC	$ 275,000	$ 3,025,000
Warehouse Engineering Costs	1	LS	$ 175,000	$ 175,000
Warehouse Rehabilitation	1	LS	$ 500,000	$ 500,000
Clear and Compact Upland Areas	14.76	AC	$ 152,460	$ 2,250,310
Mitigation	2.00	AC	$ 435,600	$ 871,200
Crushed Stone Base	32,267	CY	$ 35	$ 1,129,333
			Total Upland Area Development:	$ 7,950,843

Procure Heavy Cranes

Item Description	Quantity	Units	Unit Cost	Item Cost
Final Engineering/Procurement	1	LS	$ 400,000	$ 400,000
Heavy Crane Purchase	1	LS	$ 2,500,000	$ 2,500,000
			Total Heavy Crane:	$ 2,900,000

Bulkhead Installation and Dredging Cost Estimate

Item Description	Quantity	Units	Unit Cost	Item Cost
Harbor Development Commission Staff	3	LS	$ 40,000	$ 120,000
Final Engineering/Procurement	1	LS	$ 1,000,000	$ 1,000,000
Sheeting - PZ40	2,489,940	LB	$ 3	$ 6,224,850
Shoes for Sheets	477	EA	$ 250	$ 119,167
Wale -][MC12x31	149,322	LB	$ 3	$ 447,966
Weep Drains @ 10' o.c.	144	EA	$ 150	$ 21,642
Steel Sheeting Deadmen	429,000	LB	$ 3	$ 1,286,389
Excavation - Tie-Rods	12,825	CY	$ 15	$ 192,377
Tie-Rod	186,922	LB	$ 6	$ 1,121,534
Structural Fill - Tie-Rods	6,413	CY	$ 35	$ 224,439
Concrete Bulkhead Cap	358	CY	$ 650	$ 232,375
Bollards, 61 ton/bitt	51	EA	$ 5,500	$ 282,152
12" Dia. Timber Piles (Fender)	151	EA	$ 3,000	$ 450,664
Timber Bracing				
12" X 12" Fender	1,160	BFM	$ 100	$ 115,952
8" X 12" Fender	1,512	BFM	$ 100	$ 151,232
Dredge Basin In Front of Bulkhead - Placement of Material Behind Bulkhead	203000	CY	$ 40	$ 8,120,000.00
Dredging Channel to Turning Basin	107963	CY	$ 50	$ 5,398,148.15
Blasting and Rock Removal	25000	CY	$ 100	$ 2,500,000
Project QA/QC, Testing, Monitoring + Oversight	1	LS	$ 1,000,000	$ 1,000,000
			Total Bulkhead Installation and Dredging:	$ 29,008,888

TOTAL COST ESTIMATE: $ 39,859,731

Assumptions:
No soil densification will be needed to meet loading criteria.
No more than 25,000 cubic yards of rock will need to be blasted and removed.
Not including any additional southern extension of bulkhead or rail line to Dartmouth Furniture Site.
Cofferdam not necessary.

Indicates items that have increased over the previous $35 MM estimate for additional infrastructure and/or project items related to finishing south side of quay, additional dredging on south side of quay, crushed stone placement over the facility, and mitigation.

North Locust Terminal Cost Estimate

ENGINEER'S CONSTRUCTION COST ESTIMATE

DATE PREPARED: 11-Jun-10

CLIENT: Maryland Environmental Service

CONSTRUCTION CONTRACT NO.:

ESTIMATED BY: Moffatt and Nichol

PROJECT TITLE: NLP DOMESTIC BARGE TERMINAL PHASE 1

STATUS OF DESIGN: Concept Estimate

Item	Description	Quantity	Units	Unit Cost	Total
1001	Mobilization and Demobilization (10%)	1	LS	$436,224	$440,000
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6001	Relieving Platform	3,500	SF	$200	$700,000
6002	Float with 2 Guide Piles	2,400	SF	$100	$240,000
6003	Sheetpile wall	100	LF	$2,000	$200,000
6004	Portable Loading Ramp	1	EA	$2,000,000	$2,000,000
7001	Erosion and Sediment Control	1	LS	$40,000	$40,000
	TOTAL				**$4,854,239**
				25% CONTINGENCY	$1,213,560
	CONTRACT TOTAL				**$6,067,799**
	Stormwater Management Mitigation - Onsite	1.76	Treated Ac.	$60,000.00	$105,372
	Engineering, Administration and Permitting	1	LS	$606,779.90	$610,000
	TOTAL COST				**$6,783,171**

Appendix H
Quantification of Base Seafood Cargo for a Baseline Configuration of a Short Sea Shipping Hub
New Bedford -Harbor Development Commission

Quantification of Base Seafood Cargo for a Baseline Configuration of a Short Sea Shipping Hub

New Bedford - Harbor Development Commission

Contract No. HDC-FY08-002

April 30, 2010

Prepared by:

NAPI North American Port Infrastructure LLC

GeoInsight
Environmental Strategy & Engineering
Practical in Nature

GeoInsight

EXECUTIVE SUMMARY

The purpose of this task is to derive an estimate of the cargo that could migrate from overland routes to a New Bedford American Marine Highway (AMH) service using the seafood as the base seafood cargos with the potential of expanding to other commodes. NAPI has used a diffusion of innovation statistical model to estimate the potential cargo for an existing AMH system from its onset to the following two years. NAPI's analysis has resulted in an estimate of cargo that theoretically could migrate from the road to an in place AMH. Based on NAPI's analysis, the Seafood Industry is found capable of providing a base cargo justifying the establishment of an AMH Service.

In addition to NAPI's Task 1 Letter [1](October 29, 2009) and Task 2 Report[2] (December 16, 2009), essential background documents used for Task 3A included: (1) the "New Bedford Harbor Study"[3], a mostly qualitative but quite comprehensive analysis of growth potential for existing and potential Port Industries (by HR&A Advisors, Inc., May 1, 2009), (2) the mostly quantitative and so called "Reeve & Associates Report" titled "Analysis of the Potential Market for Short Sea Shipping Services over the Ports of Fall River and New Bedford[4]. March 29, 2006", providing useful shipping cost-differential information for cargo between New Bedford and Florida Ports, as well as Mid-Atlantic Ports. Additionally, we had preliminary discussions with seafood processors, reviewed NOAA's Seafood Landings data for Port of New Bedford and received seafood cost data from the New Bedford HDC.

The Reeve & Associates Report has shown that cost differentials between AMH and the Trucking mode are favorable to the AMH. Indeed, on a New Bedford to Florida or to Mid-Atlantic leg, AMH shipping costs are lower by 17% to 31% and by 27% to 31%, respectively, depending on whether or not Harbor Maintenance Taxes are applied. In NAPI's approach, comparative cost advantages are considered as implicitly underlying the model, but cost differentials are too small to be determinants of market capture. Market capture is further influenced by other factors of psychological nature, such as the perceived "risks of the shift to the AMH" or the "extent of behavioral changes required. These factors are amenable to statistical approaches used in marketing research.

[1] North American Port Infrastructure LLC, Task 1 – Prepare Baseline Market and Financial Data Letter, October 24, 2009.
[2] North American Port Infrastructure/GeoInsight Inc, Assessment of Commercial Interests for American Marine Highways in New Bedford, December 16, 2009.
[3] HR&A Advisors, Inc., New Bedford Harbor Study, May 1, 2009.
[4] Reeve & Associates, Analysis of the Potential Market for Short Sea Shipping Services over the Port Ports of Fall River and New Bedford, March 29, 2006.

Traditional factors such as the service's perceived advantage or benefit, the immediacy of benefits and price differentials are also implicitly present. These are taken to be perceived positively by all stakeholders, as established by earlier interviews

The model was run in three AMH service configurations (New Bedford Florida with a stop at a Mid-Atlantic Port, New Bedford to Mid-Atlantic Port only, New Bedford to Florida only), for the service's Year 1 (by Quarter) and for the Service's Years 1 to 4 (by 6-months periods). The calculations yield a tabulation showing the Seafood Market expected to be migrating from the trucking mode captured to an AMH in New Bedford Harbor, in each configuration.

For ease of reading and interpretation, with the report the tabulation is broken down into six Tables, i.e.:

- AMH Configuration 1: New Bedford to Florida with a stop in a Mid-Atlantic Port (Table #2 for Year 1, then Table #3, for the period from Year 1 to Year 4);
- AMH Configuration 2: NB to FL only (Table#4 for Y1, then Table #5, for Y1` to Y4)
- AMH Configuration 3: NB to Mid-Atlantic only (Table #6 for Y1, then Table #7, for Y1 to Y4)

Each Table is followed by short comments, focusing on the progression of market capture from period to period and from a service configuration to the next one.

The rationale and the assumptions underlying the model and its resulting Tables are explained in Section 2 to 4, and should be kept in mind while examining the figures in the Tables.

Freight market shares captured by the AMH are converted to discrete number of barges of 140 truck capacity. Some of the barges are "Less than Completely Loaded" designated by the acronym LCL, by analogy with the "Less than Container Load" or with the "Less than (railway) Car Load" term used for quantities of material from different shippers, or for delivery to different destinations, which might be carried in a single railway car for efficiency.

The following Table ES 1 presents a Consolidated Summary for the three AMH services Modeled. This Table is illustrative of the results found in the Report, where discussion and interpretation of the individual services along with the assumptions underlying the model are presented.

Table ES1: Consolidate Summary - New Bedford AMH Seafood Cargo Capture (Years 1 to 3): Mid-Atlantic and Florida Services

Service	Combined Mid-Atlantic and Florida			Mid-Atlantic only			Florida only		
Year End	1	2	3	1	2	3	1	2	3
Market Share Capture									
Incremental Capture M$	22.04	82.52	52.15	14.33	53.64	33.9	7.71	28.88	18.25
Cumulative Capture M$	31.95	163.65	302.5	20.77	106.37	196.63	11.18	57.28	105.88
Cumulative Tonnage Captured	21298	109100	201667	13843	70915	131083	7454	38185	70583
Cumulative TEU/Trucks on AMH	1775	9092	16806	1154	5910	10924	621	3182	5882
Number of Barges	13	65	120	9	43	78	5	23	42

Our Report concludes that the establishment of an AMH Service based on shipment migrations from the Seafood Industry is justified under certain conditions. In the first two AMH configurations, and not in the third one, the Seafood Industry is found capable of providing a base justifying the establishment of an AMH Service. The freight volumes involved are just sufficient to start up such a service, but they evolve to become viable and self sustaining. The way the details of such a service will be worked out (frequencies, port rotations, number of ports called, procedures to manage seasonal demand, vigilance at signs of saturation, etc.) are of the essence to its success.

An important fact to consider is the likelihood that, once the AMH is established and primed, other commodities will enter the AMH system, so that the outlook may be more favorable than discussed. However, such a development would accelerate the appearance of signs of strain in the system, and would put pressure for the Port to commit sooner to further capital expenditures and investments.

Our analysis could be refined if less rudimentary data can be collected. Yet, refining the analysis is not likely to change the general nature of the conclusions.

The present refinement level of our analysis only establishes the existence of a base and gives it shape, structure, and magnitude. Further refinements would be necessary, if it is envisaged to undertake the economic and financial feasibility of the AMH venture, which both rely on a more detailed market assessment and demanding standards.

Critical Steps Forward to Realize Potential AMH Development:

1. Estimate of capital expenditure for Carrier/Terminal Operator for the development of an AMH service consolidated with the Port of New Bedford capital expenditures NAPI summarized in our previous Task 2. The Port capital expenditures could possibly be offset by a MARAD "Short Sea Transportation Grant" under H.R. 2647, Section 3512.

2. Financial Model preparation based on the estimated capital expenditures (Step 1), operating costs, expected AMH annual cargo revenues (for the seafood industry as provided in the New Bedford Harbor Study and other commodities with emphasis on the Cape Wind Energy Port traffic), and financial costs (in various assumptions including a grant from MARAD for a "Short Sea Transportation Grant" under H.R. 2647, Section 3512) resulting in a cash flow analysis and rate of return (ROR) spreadsheet.

3. Obtain a letter of interest from a financial institution – the cash flow analysis and rate of return (ROR) spreadsheet (Step 2) will provide the basis for discussions with specialists within lending institutions and equity capital firms.

4. Use the letter of interest and the cash flow analysis and ROR to negotiate an AMH partnership between a Carrier/Terminal Operator and NBH.

TABLE OF CONTENTS

SECTIONS

SECTION 1: PURPOSE AND SCOPE: MAKING NEW BEDFORD A SHORT SEA SHIPPING HUB

The present report builds upon and supplements NAPI's Task 1 and Task 2 Reports, and must be read concomitantly with the detailed and substantive information included in these two Reports.

The purpose of this Subtask (3A) is to estimate the base cargo volume possibly available for the AMH from New Bedford seafood cargos, which would serve as the basis for future discussions with commercial shippers and terminal operators, and to tabulate estimated potential cargo volumes for AMH activities in New Bedford Harbor (NBH).

More specifically, the Scope of Work describe the task as follows: "With a focus on the Assessment of Commercial interest for AMH in New Bedford, this task consists of reviewing the initial research design and relevant Tasks 1 and 2 material, filling gaps as required, quantifying information as needed, and presenting it in the form of tabulated estimates of potential AMH related cargo volumes during the first year or two of establishing a possible service. The emphasis will be on baseline containerized cargo volumes to be shipped between NBH and Mid-Atlantic Bristol, on facilities specially developed and built to fit within the US policy of Marine Highways."

SECTION 2: APPROACH AND METHODOLOGY

2.1 Documents used

In addition to NAPI's Task 1 and 2 Reports, essential background documents used for Task 3A included: (1) the "New Bedford Harbor Study", a mostly qualitative but quite comprehensive analysis of growth potential for existing and potential Port Industries (by HR&A Advisors, Inc.), (2) the mostly quantitative and so called "Reeves Report" titled "Analysis of the potential Market for Short Sea Shipping Services over the Ports of Fall River and New Bedford, providing useful shipping cost-differential information for cargo between New Bedford and Florida Ports, as well as Mid-Atlantic Ports.

Additional qualitative but potentially quantifiable information was obtained by exploring online, both websites managed by stakeholders, and relevant news/business profiling websites.

2.2 Rationale

Each of the above mentioned Reports includes transcripts of a relatively small number of interviews with shippers, carriers and other stakeholders. Although informative, the interview approach was not found to be conclusive, nor conducive to inferences about modal shift intentions, let alone commitments.

Furthermore, allocating future shipments on the basis of classical modal spilt models was not found applicable to the problem at hand, because these models solely rely on cost differentials between two transport modes, generally familiar to most operators, through their prior experience with those modes.

Other approaches undertake averaging and rating stakeholders along several criteria weighed according to their relative importance as measured by the analysts' opinions. Such methods (akin to the Delphi technique) yield opaque formulas, and produce projections sometimes merely mirroring the analyst's personal ideas and fail to convince investors of the forecasts validity.

In the past, the above methods achieved limited in predicting market shares captured by technologically innovative transportation solutions. Indeed, if, in a long-term equilibrium perspective, a modal split formula reflecting cost differentials, can predict the traffic diverted from a rural road to a divided highway, methods such as the above mentioned, were always powerless at predicting the early market potential of genuine technological innovations, such as containerization, RoRo, airborne containers, double-stack trains, neo-bulk shipping, electric cars, etc., success, failure, market size, percentage market shares.

The American Marine Highway (AMH) concept must be considered as a technological innovation in its own right. The diffusion of the AMH in thr transportation system will take place

like all kinds of innovations, as successive groups of shippers adopt the new technology until the AMH market share eventually reaches a steady state level. Shipper's willingness and ability to adopt the AMH depends on their awareness, interest, evaluation, trial, and adoption.

In our New Bedford model, shippers are grouped into different tiers which define the timing of their entry at the lowest modal share shift level (rate of acceptance). We assume that once they enter at this lowest level the rate at which they shift increasing percentages of their shipments to the AMH (rate of market capture) will be the same, and follows an S shaped curve, also known as a logistic curve.

The information gathered in earlier interviews with stakeholders indicates that the rate of diffusion of the AMH mode is influenced by:

1. The service's perceived advantage or benefit.
2. Riskiness of the shift to the AMH.
3. Ease of the AMH use - complexity of the service.
4. Immediacy of benefits.
5. Observability.
6. Trialability (entry at the lowest modal share shift level).
7. Price differential between the AMH and the mode in use.
8. Extent of behavioral changes required.
9. Required investments and Return on investments

In our model, we assume that most of these AMH features are positively perceived, The users are not yet decided to commit to use the AMH, because it is not concretely available to be observed and to be tried.

A precise description of the Baseline startup physical facilities and service is therefore provided as follows, to this effect, and it stresses the system's ease of use, namely:

At the outset, the baseline service is assumed to be provided every other week, on articulated barges carrying 140 trailers, pushed from behind by a tug boat, serving a Florida Port with a stop in Mid-Atlantic and departing from the State Pier. This is the configuration we are using to derive the AMH base market in the present task. As traffic builds up over time, this configuration will evolve in line with the conclusions of the model's development in complexity within the next tasks.

In the New Bedford model used for this current Task, we focus on one group of customers at a time, and we assume that the observability of this group will serve for marketing to the next group. We also emphasize triability, in the sense that shifting shipments to the AMH mode is progressive, with an entry at the lowest modal share shift level. The issues of immediacy of benefits and of price differentials between the AMH and the truck hauling mode now in use have already been covered in the "Reese" Report, whose results are well publicized for the origin-destination couples of interest here, i.e. New Bedford and both Florida and Mid-Atlantic ports.

Three points are left out from Baseline to be handled statistically, i.e. point 2, (riskiness of the shift to the AMH), point 8 (extent of behavioral changes required) and point 9 (the required investments and the return on these investments). Statistical market share capture models are perfectly adapted to deal with points 2 and 8.

The issue of investments is a separate one, and has two prongs.

First, New Bedford Port capital expenditures, which were described and quantified in NAPI's Task 2 Report, and summarized here. Capital expenditure costs for terminal improvement and expansion: $ 7.5 Million (RO/RO berth improvements and apron and yard improvements for cargo operation including crane equipment and including $0.5 Million for berth area dredging to –30 MLW (envisaged AMH operations have to co-exist with the ongoing and future ferry service). Detailed consideration of the rate of return on these investments is scheduled within the next tasks.

Second, the investment issue is of concern to the freight and port services sector, which encompasses several industries, including carriers, ports, terminal operators, and third-party logistics (3PL) providers, such as freight forwarders and consolidators. Non-asset-based 3PLs do not own the vehicles or equipment used in providing their services. These firms are the majority of 3PLs. Their cooperation is practically assured, and they do not have significant investments to engage. They contract with trucking companies, other carriers, and distribution centers for whatever they need to fulfill their services. This provides them more flexibility than the asset-based firms and they are able to offer expedited and customizable supply chain solutions. Asset-based 3PLs own their own trucks and distribution centers. They are more suitable for large corporations requiring long-term contracts and value-added international transportation management services. Asset-based 3PLs and the large shippers who use them, will incur costs if they shift to the AMH, and will paradoxically be slower to enter the system.

This feature is captured within our model, at the time of grouping shipper companies into tiers, by including in the set of indicators used, an indicator reflecting the complexity (heaviness) or simplicity (lightness) of the way they turn to outsourcing services not core to their line of business. This indicator is partly subjective, and measured by visiting online websites profiling these companies.

The bottom line is that if, by dealing with the only two influential factors left, i.e. point 2, (risk the shift to the AMH), and point 8 (extent of behavioral changes required), our model shows that the Port of New Bedford can be successful at building upon visionaries and pragmatists, and can create a bandwagon effect (also known as a cascade effect) in which the momentum builds and the AMH mode becomes a de facto standard mode along with the other modes.

SECTION 3: NEW BEDFORD PORT'S BASELINE AMH DEFINITION

As mentioned, it is critical to publicize the complete image of the baseline startup service components and features. They have to be clear and simple as discussed above. There can be no base market without the description of the baseline service and its definition in terms of the service's performance on the 9 influential factors discussed above.

As a fundamental premise of our methodology, our model assumes that this requirement is fulfilled along the following overview and definitions.

2.1 The AMH concept

Under the short sea shipping concept produce, seafood, timber and other domestic goods is transported along the East Coast by boat instead of truck, reducing traffic along the Interstate 95 corridor.

Ships move up and down the Atlantic coast, carrying goods between Mid-Atlantic, Florida and Massachusetts. Trucks meet the vessels in port, load the goods and deliver them to short-haul destinations. In New Bedford, various companies would be participating in the loading and unloading of vessels, storing goods in cold storage warehouses prior to shipping, with trucks to deliver goods from New Bedford to short-haul destinations around New England. Domestic short sea shipping services are assumed to be exempt from the harbor maintenance tax. It is further assumed that the industry will rely on U.S.-built articulated barges, pushed from behind by a tug boat.

In the interviews, individual shippers and carriers have displayed a range of views –some common, some specific to each of them. For example, a common view is that sending the commodities to New York by vessel rather than truck would be too costly and time consuming, as it seems to be too short of a haul, while short sea shipping seems to be more cost-effective for longer hauls, such as from New England to Virginia and Florida.

In contrast with the baseline, the target is for New Bedford to be sending and receiving goods to and from Port Canaveral or another Florida port two years from now, on articulated tug barges of no more than 400 feet in length carrying 140 trailers with a start-up frequency of two to four short sea shipping barges per month, evolving later to one to two per week.

2.2 Implementation of the Concept

New Bedford's current cargo facilities in terms of berth and yard capacity need to be improved to effectively support the above described short-sea service. State Pier can handle the short sea

shipping traffic with some structural improvements. In this configuration, there would be no need to change the Route 6 bridge.

The State Pier is the Port's most immediate opportunity for AMH operations. State Pier includes the New Bedford State Pier and its warehouse/open storage operations and the New Bedford Ferry terminal. Additionally, the Sprague Energy Terminal to the south may present the Port with opportunities for long term expansion.

For the New Bedford State Pier and the New Bedford Ferry Terminal, the HDC has completed planning and engineering studies, proposing several redevelopment projects that would improve the terminal through rehabilitation of the berths and yard area to handle the AMH operations. These improvements address lay-down areas and berth strength for heavy lifts. These activities will co-exist with the ongoing and future ferry service. Additionally, the HDC has proposed a series of transportation improvements to the State Pier, such as providing an extension of rail onto the site. To allow for the loading and offloading of vessels at State Pier, there are several considerations under study, including strengthening of the berth apron for the use of mobile cranes and potential improvements to accommodate Ro/Ro ramps.

State Pier description / 8 Acres /Annual throughput 16,000 to 36,000 TEU/year (depending on operating efficiencies/10 to 14 tons per TEU (Container loads are much lighter for conventional freight (mainly retail) than for commodities, the shipping industry prefers using larger containers, i.e. 40 footers, as they offer more volume for the same handling cost. If shipping commodities loading loads are 26 to 28 tons for a 20 footer and 30 tons for a 40 footer).

SECTION 4: THE NEW BEDFORD MODEL

4.1 The four Tiers in the New Bedford Seafood Industry

In the interviews, individual shippers and carriers have displayed a range of views –some common, some specific to each of them. For example, they would not express the chances that they would use the AMH, or assess the potential of success of such a service. Other views included doubts about a steady buildup of AMH cargo volumes. As mentioned above, another common view is that sending the commodities to New York by vessel rather than truck would be too costly and time consuming, while short sea shipping seems to be more cost-effective for longer hauls, such as from New England to Virginia and Florida.

The important fact we focus on in the model elaborated here, is that, notwithstanding the diversity of individual views, the set of stakeholders forms a "statistical population" whose overall behavior is predictable by means of well established statistical market segmentation methods.

While it is not feasible to sort out and aggregate single views, it is easier and more accurate to tackle the problem statistically, rather than individually. Therefore, the first thing that we did was to group the shippers into homogenous Tiers, which are amenable to which statistical results can be applied.

The grouping of shippers into five Tiers, was based on dynamic indicators found in earlier reports and from online information, e.g. productivity, size, whether the company has branches or is a single location, whether the existing logistic network appears complex (difficult to modify) or simple (light), whether the company emphasizes its concern for environmental sustainability (as an indicator of community activity), etc., and deemed to be correlated with the above mentioned 9 factors found in earlier reports to influence the rate of diffusion of the AMH mode.

Along with most analysts, we labeled these groups of adopters of the new AMH technological innovation as visionaries (Tier 1), trendsetters (Tier 2), pragmatists (Tier 3), followers (Tier 4) and hangers-on (Tier 5). For different innovations, a shipper might be a trendsetter of refrigeration innovations, but a laggard of logistic innovations. As explained below in more detail, within each of these Tiers, and at successive periods, the AMH will capture from shippers usual mode, a percentages of their shipments, increasing over time, and derived from standard deviations from the mean of the normal bell shaped curve.

4.1.1 Tiers composition

These categories can be further described as follows, although the model does not make use of these descriptors:

- Visionaries - more prosperous, more venturesome and more risk-oriented.
- Trendsetters – young, popular, more educated, tend to be community leaders.
- Pragmatists – deliberate, more conservative but open to new ideas, active in community.
- Followers - skeptical, traditional, less educated, fairly conservative and less socially active.
- Hangers-on – fear of debt, very conservative, know all the right lingo, neighbours and friends are main info sources, but just seldom actually do anything.

The distribution of the Tiers was compiled as shown the following Table, from information found in the "New Bedford Harbor Study", by H&RA Advisors, Inc, dated May 01, 2009. The sales data appearing in the Table are somewhat optimistic, but their orders of magnitude are sufficiently accurate for the purpose of this task. Indeed the model presented here will need to be refined as better data becomes available, and research is pursued.

Table 1: Tiers Composition

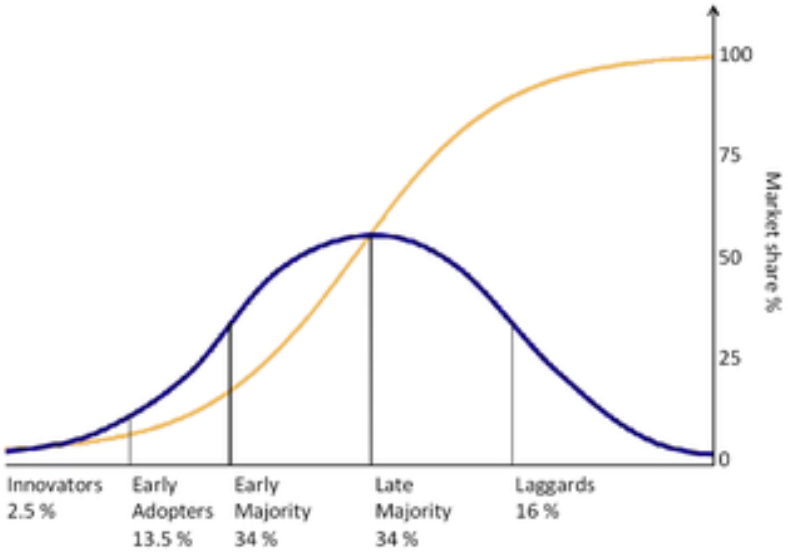
		Number in Group	Percentage (numbers)	Sales MM$	Percentage Sales
Tier 1	Visionaries	10	17.54%	9.6	3.04%
Tier 2	Trendsetters	11	19.30%	23.7	7.50%
Tier 3	Pragmatists	10	17.54%	52.5	16.61%
Tier 4	Followers	12	21.05%	145.3	45.97%
Tier 5	Hangers-on	14	24.56%	85	26.89%
	Total	57	100.00%	316.1	100.00%

4.1.2 Market share capture

More specifically, with respect to the five Tiers, e.g. the visionaries (Tier 1), trendsetters (Tier 2), pragmatists (Tier 3), followers (Tier 4) and hangers-on (Tier 5), our model specifies that within each Tiers, shipper will statistically allocate to the AMH, over time, increasing percentages of their shipments, derived from standard deviations from the mean of the normal bell shaped curve, whose cumulative distribution is the "logistic distribution", characterized by the "s-curve" shown below. In other words, within each Tier (even within the "visionaries" Tier,

for example), the shippers are diversified, and include companies which, from the point of view of releasing their shipments to the AMH, over time, after their entry, will behave as innovators, early adopters, early majority, and laggars. The percentages of their shipments captured by the AMH are statistically derived from this curve.

Figure 1: Logistic Curve



The logistic distribution and the S-shaped pattern that results from it have been extensively used in many different areas the most important of which include the diffusion of new-product sales, and the diffusion and substitution of primary energy sources.

4.1.3 Entry points in time

In order to observe the sequential entry of the Tiers in the AMH system, and start accounting for the incremental capture of their shipments, we have divided the timeline into several entry points in time. The first four entry points were the four quarters following the AMH inauguration. This choice was made by feedback consideration of the service frequency. The next entry points are separated by a six months period.

We define the rate of adoption of an entrant company, as the transfer rate of this company's shipments from truck hauling to the New Bedford AMH.

4.2 First Tier entry and incremental market share transfers

For the first tier, we calculate an incremental percentage of volumes shifting to the AMH, over time – slow at the start (2.5% of the sales at entry), more rapid as modal shifting increases,

evolving to 13.5%, then 34%, etc. At some later point, after several Tiers have entered the system, these increments will be leveling off, if the service shows signs of stress or saturation.

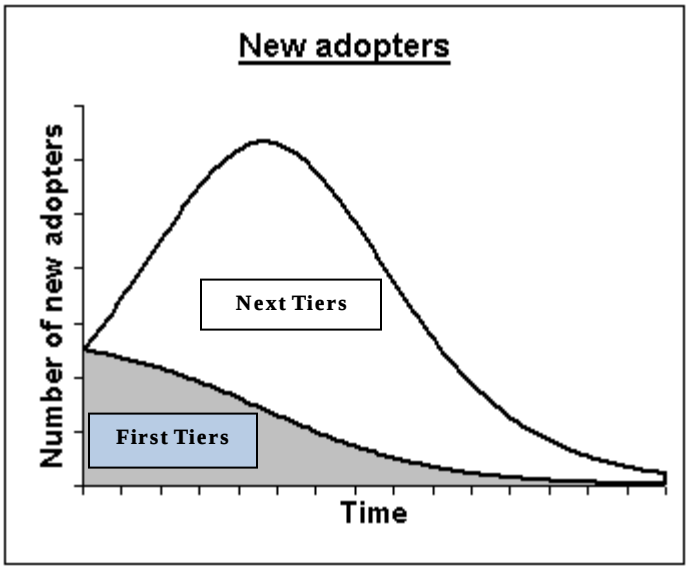
At that point in time, the AMH will have to mitigate saturation by introducing a new event, such as an extension of the service or the building of additional terminal space.

4.3 Successive Tier entries and market share capture.

The successive Tiers enter the system as they observe the results achieved by the other Tiers, and their after-entry behaviour is assumed to be the same, i.e. they follow a process of progressively entrusting to the AMH larger shipment proportions, over time.

The process can be visually described by the following graph:

Figure 2: New Adopters and Saturation



New adopters generate additional tiers, which enter the sysyem, and behave, over time, in the same wat as the fish tiers. At a point in time, when saturation appears, the Port's AMH will have to mitigate saturation stress by introducing a new event, such as an extension of the service or the building of additional terminal space.

Our calculations show that saturation of the State Pier in unlikely to occur with traffic migrating from the Seafood sector alone. However, if other commodities and sectors, decide to join the AMH, Saturation is will very likely to occur and will have to be studied in a separate task.

SECTION 5: MARKET SHARE CAPTURE BY AN AMH SERVING BOTH A MID-ATLANTIC PORT AND A FLORIDA PORT

We start by considering the viability of a Short Sea Service between New Bedford and Florida, with a stop in a Mid-Atlantic Port.

The Table shows that, for the first year we explicitly have 4 quarterly periods (Q1, Q2, Q3, and Q4= Year 1), which include 4 entry points, located at the end of every quarter (Tier 1 enters during Q1, Q2 Tier 2 enters, Q3 Tier 3 enters, Q4=Y1 Tier 4 enters)

We first calculate, in terms of fish shipments $ values, the Market Shares incrementally captured by the AMH during every time period,

Next, we cumulate these successive increments, and we convert these values in Metric tons using an average of $1,500 per ton.

These tonnages are then converted in TEU containers, using the average of 12Metric Ton per container

Finally, we calculate the number of 140 TEU barges required to move these Containers to either a Mid-Atlantic or Florida Port.

5.1 First Year (Mid-Atlantic and FL Service)

The first year results are found in the following Table:

Table 2: Freight market share captured by New Bedford AMH (First Year): Mid-Atlantic and FL service

Time period	Q1	Q2	Q3	Q4=EndY1
(Year 1)				
M$ Market Share Capture				
Incremental Capture(M$)	0.24	1.89	7.78	22.04
Cumulative Capture(M$)	0.24	2.13	9.9	31.95
Cumulative Tonnage Captured	160	1419	6603	21298
Cumulative TEU/Trailers on AMH	13	118	550	1775
Number of Barges	1	1	4	13

Table 2 shows that the build up is indeed very slow, but takes place. During the first two quarters there is freight for less than a barge capacity, although freight almost reaches a barge capacity at the end of the first quarter.

At the end of the third quarter, the service can fill just about 4 barges (560 slots). If the service is scheduled to include a barge every other week, i/e. if it is a two barges per month service, it requires up to 6 barges per quarter. Table 2 shows that such a service can be viable at the end of the first year.

5.2 Subsequent years (Mid-Atlantic and FL Service)

Subsequent years results are found in the following Table:

Table 3: Freight market share captured by New Bedford AMH (Years 2 to 4): Mid-Atlantic and FL Service

Time period	Q4=EndY1	MidYear 2	EndYear 2	MidYear 3	EndYear 3	MidYear 4	EndYear 4
(Years 2 to 4)							
M$ Market Share Capture							
Incremental Capture(M$)	22.04	49.18	82.52	86.7	52.15	13.6	0
Cumulative Capture (M$)	31.95	81.13	163.65	250.35	302.5	316.1	316.1
Cumulative Tonnage Captured	21298	54087	109100	166901	201667	210733	210733
Cumulative TEU/Trucks on AMH	1775	4507	9092	13908	16806	17561	17561
Number of Barges	13	32	65	99	120	125	125

A two-barge per month service (every other week), adds up to 6 barges per quarter, and to 24 barges per year. It appears from Table 3 to be attainable after 1.5 year.

A four-barge per month service (weekly), adds up to 24 barges per 6-month period, or to 48 barges per year. It appears from Table 3 to be attainable after 2 years.

A two barges per week service adds up to 48 barges per 6-months period, or to 96 barges per year. It appears to be feasible from Table 3 from the middle of the third year.

If the State Pier capacity is 16,000 TEU's per year, it will be reached by the end of the third year, and possibly before, depending on the seasonality of the demand for barge transport. AMH incremental market shares will be leveling off, as the service will show signs of stress or saturation. At this time, the Port's AMH will have to mitigate saturation stress by introducing a new event, such as an extension of the service or the building of additional terminal space

SECTION 6: MARKET SHARE CAPTURE BY AN AMH SERVING ONLY A NEW MID-ATLANTIC PORT

Our review of the various analyses of the Potential Market for AMH services over the Ports of Fall River and New Bedford led us to adopt a reasonable estimate of the sales spilt between the Florida destination (35%) and the Mid-Atlantic destination (65%). Consequently the model was run once more for the New Bedford-Mid-Atlantic service, to yield the following conclusions.

6.1 First Year (Mid-Atlantic only Service)

The first year results are found in the following Table:

Table 4: Freight market share captured by New Bedford AMH (First Year): Mid-Atlantic only Service

M$ Market Share Capture:	Q1	Q2	Q3	Q4=EndY1
(Year 1)				
Incremental Capture M$	0.156	1.23	5.05	14.33
Cumulative Capture M$	0.156	1.38	6.44	20.77
Cumulative Tonnage Captured	104	922	4292	13843
Cumulative TEU/Trucks on AMH	9	77	358	1154
Number of Barges	1	1	3	9

Table 4 shows that the build up is slower than in the previous case. During the first two quarters there is freight for less than a barge capacity, and freight slightly exceeds two barges capacity at the end of the third quarter.

At the end of the third quarter, the service cannot fill 4 barges (560 slots). If the service is scheduled to include a barge every other week, i/e. if it is a two barges per month service, it requires up to 6 barges per quarter. Table 3 shows that such a service can be viable at the end of the first year, as well as the previous example.

6.2 Subsequent years (Mid-Atlantic only Service)

Subsequent years results are found in the following Table:

Table 5: Freight market share captured by New Bedford AMH (Years 2 to 4): Mid-Atlantic only Service

Market Share capture (Years 1 to 4)	Q4=EndY1	MidYear 2	EndYear 2	MidYear 3	EndYear 3	MidYear 4	EndYear 4
Incremental CaptureM$	14.33	31.97	53.64	56.36	33.9	8.84	0
Cumulative Capture M$	20.77	52.74	106.37	162.73	196.63	205.47	205.47
Cumulative Tonnage Captured	13843	35157	70915	108486	131083	136977	136977
Cumulative TEU/Trucks on AMH	1154	2930	5910	9040	10924	11415	11415
Number of Barges	9	20	43	65	78	82	82

A two-barge per month service (every other week), requires up to 6 barges per quarter, and to 24 barges per year. It appears from Table 5 to be attainable at the end of the second year.

A four-barge per month service (weekly), requires up to 24 barges per 6-month period, or to 48 barges per year. It appears from Table 5 to be attainable by the middle of the third year.

A two barges per week service requires up to 48 barges per 6-months period, or to 96 barges per year. From Table 5, it does not appear to be feasible at the end of the fourth year.

If the State Pier capacity is 16,000 TEU's per year, it will not be reached by the end of the fourth year. Till then, the service will not show signs of stress, strain nor saturation, and the Port's AMH will not have introduce new events, such as an extension of the service or the building of additional terminal space

SECTION 7: MARKET SHARE CAPTURE BY AN AMH SERVING ONLY A FLORIDA FLORIDA PORT

7.1 First Year (Florida Port only Service)

The first year results are found in the following Table:

Table 6: Freight market share captured by New Bedford AMH (First Year): Florida Port only Service

Market share capture (Year 1)	Q1	Q2	Q3	Q4=EndY1
Incremental Capture M$	0.084	0.66	2.72	7.71
Cumulative Capture M$	0.084	0.74	3.47	11.18
Cumulative Tonnage Captured	56	497	2311	7454
Cumulative TEU/Trucks on AMH	5	41	193	621
Number of Barges	1	1	2	5

Table 6 shows that the build up is indeed very slow. During the first two quarters there is freight for less than a barge capacity, and freight almost reaches almost two barges capacity at the end of the third quarter.

At the end of the fourth quarter, the service can fill just a little more than 4 barges (560 slots). If the service is scheduled to include a barge every other week, i/e. if it is a two barges per month service, it requires up to 6 barges per quarter. Table 6 shows that such a service cannot yet be viable at the end of the first year.

7.2 Subsequent years (Florida only Service)

Subsequent years results are found in the following Table:

Table 7: Freight market share captured by New Bedford AMH (Years 2 to 4): Florida Port only Service

Market Share Capture (Years 1 to 4)	Q4=EndY1	MidYear 2	EndYear 2	MidYear 3	EndYear 3	MidYear 4	EndYear 4
Incremental Capture M$	7.71	17.21	28.88	30.35	18.25	4.76	0
Cumulative Capture M$	11.18	28.4	57.28	87.62	105.88	110.64	110.64
Cumulative Tonnage Captured	7454	18931	38185	58415	70583	73757	73757
Cumulative TEU/Trucks on AMH	621	1578	3182	4868	5882	6146	6146
Number of Barges	5	13	23	35	42	50	50

A two-barge per month service (every other week), requires up to 6 barges per quarter, and to 24 barges per year. It appears from Table 7 to be almost attainable at the end of the second year.

A four-barge per month service (weekly), requires up to 24 barges per 6-month period, or to 48 barges per year. It appears from Table 7 to be attainable by the middle of the fourth year.

A two barges per week service requires up to 48 barges per 6-months period, or to 96 barges per year. From Table 7, it does not appear to be feasible at the end of the fourth year.

If the State Pier capacity is 16,000 TEU's per year, it will not be reached by the end of the fourth year. Till then, the service will not show signs of stress, strain nor saturation, and the Port's AMH will not have introduce new events, such as an extension of the service or the building of additional terminal space

SECTION 8: CONCLUSIONS

The above analysis relies only on the Seafood Industry shipments in order to justify the establishment of a AMH service. Although, in the first two above configurations, this industry is found capable to provide a minimal base to this effect, it is clear that the freight volumes involved are barely sufficient to start up such a service. The way the details of such a service are worked out (frequencies, port rotations, number of ports called, procedures to manage seasonal demand, vigilance at signs of saturation, etc.) are essential to its success.

The important fact however that is it would be reasonable to expect that once the AMH is established and primed, other commodities would enter the fray, so that the outlook may be more favorable than discussed. Such a development would be double edged insofar that it may accelerate the appearance of signs of strain in the system, and would put pressure for the Port to commit to further capital expenditures and investments.

The analysis could be refined if less rudimentary data can be collected. Yet, it does not seem that this additional effort would change the general nature of the conclusions. However such an effort would be necessary in order to complete the market assessment and bring it up to the demanding standards of the economic and financial feasibility of the venture, beyond the present level of the analysis which only establishes the existence of a base and gives it shape, structure, and magnitude level.

In all events, launching an AMH service from NBH will require satisfying several stringent requirements and this could only be achieved through a Public/Private/Partnership between a carrier and the Port.

<u>Critical Steps Forward to Realize Potential AMH Service Development:</u>

1. Estimate of capital expenditure for Carrier/Terminal Operator for the development of an AMH service consolidated with the Port of New Bedford capital expenditures NAPI summarized in our previous Task 2. The Port capital expenditures could possibly be offset by a MARAD “Short Sea Transportation Grant” under H.R. 2647, Section 3512.

2. Financial Model preparation based on the estimated capital expenditures (Step 1), operating costs, expected AMH annual cargo revenues (for the seafood industry as provided in the New Bedford Harbor Study and other commodities with emphasis on the Cape Wind Energy Port traffic), and financial costs (in various assumptions including a grant from MARAD for a “Short Sea Transportation Grant” under H.R. 2647, Section 3512) resulting in a cash flow analysis and rate of return (ROR) spreadsheet.

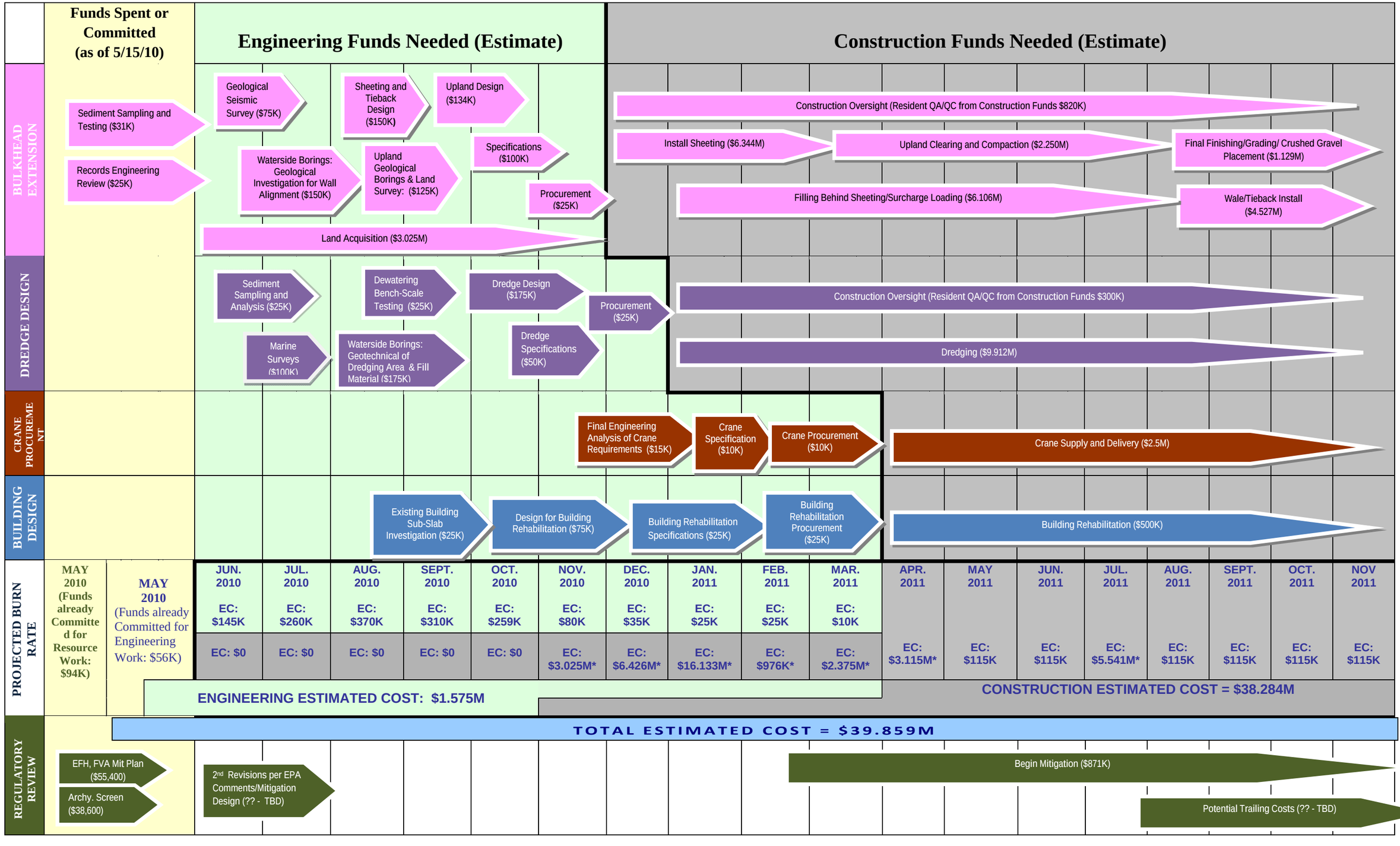
3. Obtain a letter of interest from a financial institution – the cash flow analysis and rate of return (ROR) spreadsheet (Step 2) will provide the basis for discussions with specialists within lending institutions and equity capital firms.

4. Use the letter of interest and the cash flow analysis and ROR to negotiate an AMH partnership between a Carrier/Terminal Operator and NBH.

Appendix I
Project Components Project Timeline

DRAFT Flow Chart – Sequencing and Timing for South Terminal

ENGINEERING AND CONSTRUCTION



* - Note: Breakout of construction costs assumes separate contractors for each phase of construction. If one contractor is used for multiple phases, much of the total construction budget will need to be committed at the start of construction.

Appendix J
Port of New Bedford – North Terminal

Port of New Bedford - North Terminal:

North Terminal currently has a multi-track rail spur that extends to the newly constructed bulkhead at the south end of the Terminal, and a new Ro/Ro ramp for truck-to-barge transfer at the north end of the Terminal. Planned expansion of the facility includes an extension of the bulkhead linking the new bulkhead at the south end of the Terminal to the Ro/Ro ramp at the north end of the Terminal, providing a continuous bulkhead 1,200-feet long and adding 5-acres of useable land to the existing 10-acres that currently exists at North Terminal.

The facility is located immediately adjacent to the City's existing main commercial rail-yard, and additional train staging and storage is available at that facility. Additional rail spurs at the northern end of the new bulkhead and extending to the water's edge are planned, allowing for additional vessel/rail Intermodal opportunities, including Loadon/Load-off and rail-barge Ro/Ro. Track and tire mounted cranes are envisioned for the facility, allowing for both vessel unloading and movement and staging of materials upland. Existing roadways servicing the Terminal will be improved to allow for additional traffic flows, and paved lay-down and storage areas are planned.

North Terminal / Rail-yard = 33.5 acres

- Paved staging Area = 7.5 acres
- Unpaved Storage Area
- On-Rail Railcar Storage = 12 acres
- Staging for more than 100 Railcars